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THE NEW VINERY AT BLITHEWOOD, erected about eighteen months ago, we have had engraved as the frontispiece embellishment of the present number.

The glass structures in general use, both in this country and England, it must be candidly confessed, are rather ugly and unsightly objects. They have frequently either the common-place glazed-shed appearance of a market gardener's rude green-house, or the clumsy and heavy air imparted to them by some architect or builder, whose knowledge of the matter in hand, is, at the best, crude and imperfect.

The building of which we now present our readers a view, fig. 17, strikes us as a happy exception to these remarks. To much simplicity of detail and excellent arrangement for its purpose, it adds a chaste and becoming architectural character, which gives it an air of elegance and finish in every way worthy of a handsome country seat.

With regard to the exterior, we think the proportions excellent. The slope of the roof, about 40°, is one of the best for this climate. There is a particularly light yet firm and pleasing effect in the structure of the rafters, and especially the upright glass in front. The chaste ornaments, which terminate the rafters at the eave and ridge lines, joined to the very tastefully decorated gables, strike us as producing a very elegan and harmonious effect—greatly superior to any thing of the kind that we have yet seen attempted.

The length of this vinery is about 100 feet. Every one familiar with long uniform ranges of glass, is aware of a stiffness and monotony of effect in the exterior, which is by no means agreeable. In the present case, this is entirely avoided by a projecting compartment in the centre of the range. This central compartment is used as a green-house for choice plants. In it is placed the principal door, and supposing this portion of the range, which is comparatively a small one, filled with summer blooming plants, such as the new Fuchsias, Gloxinias, Achimenes, &c., which are so gay and bright from May to December, we hardly know a more beautiful *vestibule* to a vinery range, filled with luxuriant and prolific grapes.*

We should remark here, that this range of glass is intended to be used as a *cold*

* Or to those who care little for a green-house, this compartment might be used for forcing an early crop of grapes.

vinery—that is, the grapes are to be grown without artificial heat. The perfection to which this mode of growing the Muscat of Alexandria, Black Hamburgh, &c., was carried in the old vinery at Blithewood, so well satisfied its proprietor, that he erected the present house for the same general plan of culture. Our sun in this latitude is at all times bright and powerful enough to mature the foreign grape perfectly, with the simple aid of glass and the power which it gives us of controlling the changes of atmosphere, thus guarding against the too violent fluctuations to which we are often subject. The position of this vinery at Blithewood is remarkably good. It stands on the north boundary of the fruit garden, with a southern aspect, and is backed by a thick copse of wood; hence the rear of the building is never seen by the visitor, while the front appears to the best advantage. In a situation exposed on all sides, by doubling the rafters, forming a span roof, and pursuing the same general style, a very beautiful and perfect structure would be obtained, for any purpose.

The ground plan, fig. 18, we believe almost sufficiently explains itself. The height of the roof, and the clear width of the vinery itself, are each about 15 feet. The width between the rafters, from centre to centre, is four feet. Underneath the stage in the green house, is a large cistern for the supply of the cold range with water. At the back of the range are a potting shed, and a fruit and seed room. The vines are planted in the usual mode—one beneath each rafter.

Most of our readers are already familiar, through the published views in our *Landscape Gardening*, with Blithewood, one of the most beautiful of American country seats, the residence of Robert Donaldson, Esq., situated on the east bank of the Hudson, about 100 miles from New-York. The present structure bears the same marks of superior taste and refinement in landscape embellishment and building, that we have before so gladly admired and commended in this demesne.

Having given this as a specimen of a large and highly tasteful vinery, we hope soon, also, to lay before them, a view and plan of a structure for raising foreign grapes, constructed in the cheapest and simplest manner, and with a view not only to the closest economy in the building itself, but also in the care required in the culture of the grapes.

THE BLIGHT IN THE PEAR TREE.

The orchard cultivation of the pear is rapidly becoming an important matter. The soil and climate of a large portion of the Union are, probably, as well suited to the growth of this fine fruit as those of any country whatever. As an instance of the present state of the market for pears, we may mention that, to our knowledge, a single grower and dealer, in this state, sold in New-York, in two years past, two thousand dollars worth of pears, mostly of the White Doyenné (or *Virgalieu*). They were of the very finest quality, and brought nearly twelve dollars per barrel. The quantity is large to be offered by one person, but the price shows that pears of the finest quality are yet scarce in our markets. The fact indeed is this;—to those whose soil is favorable, the pear is the most profitable of all orchard trees.

There is only one drawback to the extensive cultivation of the pear tree—but this is an important one; we mean, of course, THE BLIGHT.

To see a fine healthy tree, apparently in the condition of the utmost vigor, suddenly —sometimes in a single day—turning black in its branches, and dying as if struck by lightning; this is indeed discouraging to the cultivator.

We have, in our work on Fruit Trees, given our views, at considerable length, on the nature of this disease, popularly known as the *fire blight*, or *fire blast*. We will only, therefore, here repeat, that there are two distinct maladies known by this name, and often confounded together. One is the *insect blight;* the other the *frozen-sap blight*.

The *insect blight* we do not consider a malady of a very serious nature. As it begins at the extremity of the tree, at or near the ends of the branches, and as its spreading depends entirely upon the care or carelessness of the cultivator, it is his own fault if it ever destroys *many* trees. Experience and observation have convinced us that the pruning knife, vigorously applied the moment the insect first commences his attack in June,* and faithfully persisted in, will soon rid one's garden or orchard of this minute but most poisonous *Scolytus*.

But the *frozen-sap blight* is quite another and a much more alarming disease. Some parts of the country are most severely visited by it; and where it is common, its effects are so disastrous, that unless some remedy can be offered, the extensive culture of this fine fruit must be abandoned there.

It is, to our own mind, thoroughly established, that this form of blight arises from the sudden freezing and thawing of the sap vessels in winter. Just in proportion, therefore, as the system of a tree is filled with sap, or unelaborated juices, at the close of the growing season, such will be its liability to be affected by this form of blight. Hence, trees growing on dry and high ground, where the growth is completed early in summer, will usually entirely escape this form of blight; while those growing on low and moist soil, where vegetation continues to a late period, will always be more subject to it. Hence also, the comparative rarity of the frozen-sap blight in the drier and poorer soil of the Atlantic states, and its great prevalence in the deep deposits of vegetable matter which make up a large part of the best soils of the west.

If any one will carefully examine a tree affected by the frozen-sap blight, he will notice *spots* on the bark of the trunk or principal branches, which have a dead or withered appearance. The bark there is contracted, blackish, and is shrunk below the level of the surrounding healthy portions. This is often observable very early in the spring. As the season opens, the tree starts into leaf, and grows luxuriantly: suddenly, about the middle of June, sometimes a little earlier or later, a terminal shoot, a branch, or the whole tree, droops and dies.

If we pursue the examination a little further with the knife, we shall find the inner portion of the bark, next the wood—in short, that part where the downward current of sap takes its course—has assumed a blackish hue. This taint is not confined to that part of the tree, viz., the limb or branch where the *external* symptoms of the blight are shown, but extends, more or less rapidly, from that point through the whole of the rest of the tree, unless it is arrested by amputation in a very early stage.

The death of pear trees by this form of blight has been supposed to be a mecha-

* Speedily known by the appearance of the shoot, which turns black, leaf and branch, almost immediately. It should always be amputated a foot below where there are any marks of discoloration

nical effect, similar to that caused by girdling or ringing a tree. This is, indeed, a sufficient explanation of some few cases; since it is undoubtedly true, that the effect of the frozen and dead spot of bark, when it extends quite round the tree, is exactly similar to girdling it, or removing the same quantity of bark altogether. The leaves would expand in the spring, because the upward current of sap would be carried on through the young layer of wood of the previous season. But when the current commences passing downward through the inner layer of bark, the tree must perish, because the channel of communication is cut off by the dead spot of bark. But supposing, in this case, this spot to be on one of the principal limbs, then *the mortality would be confined to the portion above this spot.*

But every one who has carefully watched the frozen-sap blight, very well knows that in these instances it is not confined to such branch. On the contrary, in most cases, if left to itself, it pervades the whole system of the tree, the vitality of which is destroyed. Sometimes its progress is so rapid that the whole seems affected in a few days; at others, it is so gradual, that it is a couple of years before the mortality is complete.

We have satisfied ourselves that this effect is generally owing to the sap, which is rendered poisonous to the tree by the action of frost.

1st. Because the malady is distinctly traced, in its early progress, by a discolouration of the inner bark alone. It is through this that the principal current of the sap is carried on. That portion of the sap vessels, ruptured and broken by sudden frost and thawing, is more or less filled with putrid decomposing vegetable matter. This matter is taken up by the upward current of sap, and disseminated through the branch above it, the adjoining parts, or through the system of the tree.

If the diseased part is large, and the poisonous matter abundant, the tree will die almost immediately on the commencement of vegetation. But this is rarely the case. The first upward current of the sap in the spring, is so watery and abundant that it would require to be very largely infected to cause immediate death. In a few weeks, however, as soon as the leaves have grown large enough properly to elaborate the juices, and the current of digested food sets downward through the system of the tree, the effect of the poison begins to show itself. If the diseased spot is upon a branch, and is small in extent, its effect will probably be confined to the destruction of that portion. If the portion is larger, but the diseased matter, or putrid sap, small in quantity, it may only cause a general decline of health in the tree. But when it is much extended, and is once fairly taken up and distributed throughout the system of the tree, nothing will save it. If it does not all die the first season, it will the second, or even, as we have repeatedly observed, two or three years afterwards. When we can see, on raising the inner bark, that it is discoloured, then we may be sure the poison has already traversed the sap vessels, and the fate of such portion of the tree is sealed, however flourishing it may yet appear in the outer bark or the leaf.

2d. Because the symptoms of the frozen-sap blight are almost entirely similar to those which are produced by inoculating the system of a tree in early spring with a small quantity of arsenic, or any other powerful agent destructive to vegetable life. If a little arsenic is introduced into the circulation of a fruit tree at that season, it first discolours the sap vessels of the inner bark; then the leaves suddenly flag and droop;

the branch shrivels and turns black; and finally, if the dose is large enough, the whole tree dies.

That the sap of trees is often wholly changed in its nature by the cold, any one who examined the state of the peach and many other fruit trees, in the spring of 1836, after the extraordinary and unparallelled winter of 1835, will easily understand. Thousands of trees, always hardy before, were destroyed outright by the excessive cold of that winter. In all cases, the sap vessels were more or less distended or burst; the matter contained in them became glutinous, dark coloured, and, in some cases, offensive to the smell. Nearly all the trees which presented this appearance during the spring, died before the autumn of the same year.

What we call the frozen-sap blight, is not confined to the pear tree alone. We have seen it in several other trees not entirely hardy in this latitude, or which suffer from winters of unusual severity. Such are the Ailanthus, the Catalpa, and the Spanish Chestnut. The latter tree, especially, shows very frequently, while standing in the nurseries and still young, the same symptoms as the blighted pear tree. First, early in the spring, patches of shrivelled and discoloured bark near the lower part of the trunk; second, about the beginning of summer, sudden withering of the foliage, death of the branches, and often of the whole tree.

A most important question, which we now reach, is this: Are these diseased spots, where the malady first arises, and from whence it is disseminated, the immediate effect of the freezing, or the thawing?

We think we are prepared to answer this question. The fact that these spots, when they occur on the trunk or larger branches, almost invariably appear on the *southern* side, proves clearly that it is the too rapid *thawing* caused by the sun's rays, which bursts the sap vessels, and is the immediate cause of the alteration in the matter deposited in them. Were it the effect of the frost simply, the evidences would appear equally on all sides of the trunk.

Again, it is well known to all who have the care of half-hardy trees or plants, that if shielded from the direct action of the sun's rays, either by a mere *shading* of boards, or by placing them in a northern exposure, they do not suffer in the least, even by a temperature much colder than that which destroys the same trees when planted in a sunny southern exposure. A plant, in other words, will bear, without injury, a very severe frost, if it is not, directly afterwards, exposed to a sudden thawing.

Now the pear tree appears, so far as regards its bark, to be the most tender of our fruit trees. Our climate in winter is often one of the most sudden and extreme variableness. To-night we have the thermometer at zero of Fahrenheit; the next morning we have a bright unclouded sun, that shines on any dark object exposed to it, with all the warmth of April. The consequence to a susceptible tree is obvious. Any part which happens to be especially exposed, either from its position, as upon the southern side of the trunk, or from the circumstance of the lodgment of any unusual deposit of juices therein, is of course most likely to suffer from the sudden and powerful effects of the sun immediately after severe frost. Here, accordingly, we soon find the sap vessels burst, the bark shrivelled,and the poisoned matter accumulated, which is the source of the blight of the ensuing spring and summer.

What is the remedy for the frozen-sap blight?

For the blight in its milder forms, as we

have already said, vigorous pruning is often sufficient to arrest its farther progress. When it has thoroughly passed into the system of the tree, there is no known remedy. But perhaps a still more important question to the orchard grower of pears is this: Is there no certain preventive to this most destructive form of blight, for those soils and situations most exposed to it?

It is with a view of suggesting such a remedy, that we have called attention to the subject, at the present time. We propose to prevent the frozen-sap blight entirely, *by whitewashing the stems and principal branches of all valuable pear trees every autumn, after the leaves have fallen.* By this simple operation, we think the injurious action of the sun will be entirely prevented; its rays will be, for the most part, reflected, and the rapid thawing of any large part of the bark rendered entirely impossible.*

It may seem to some persons that it would be a tedious and troublesome process to whitewash the trunks and larger branches of all the pear trees in a large garden or orchard, every season, just before winter. We have only to answer to such an objection, that the loss of one valuable tree, in a full bearing state, is a far more serious matter than the cost of whitewashing a good sized orchard, for half-a-dozen years. An active man, with a large brush, a light step-ladder, and a little practice, will brush over a good many trees in a day. Where this blight does not appear, it will not be necessary. In districts where it is common, if this should prove effectual, we are sure it will be gladly resorted to.

We have, ourselves, no great admiration for whitewashed trees. They are rather unpleasing and unnatural looking objects, at the best. But if we can drive from our gardens and orchards this *monster* malady of the pear, by virtue of a lime coat, we will be content to shut our eyes to all but the *economical* view of the subject.

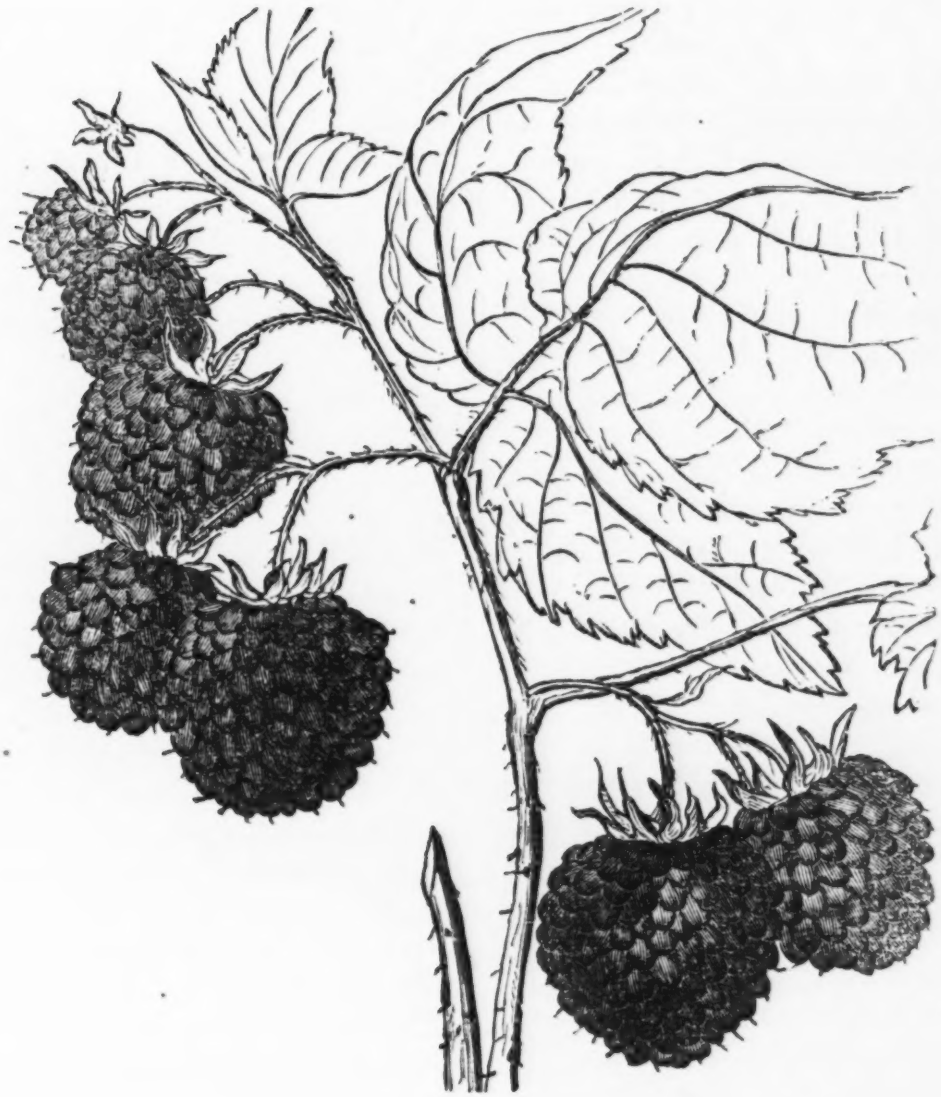
Our readers will, we trust, consider our preventive as one which we suggest for extensive trial, and not one which we give as having borne the test of long experience. We have been induced to give more than usual examination of late, to this subject, by having our attention called this season to two most promising young pear orchards, both just coming into a bearing state, and both suffering greatly from this alarming disease. These thrifty young specimens, bearing infected spots on the south sides of their trunks, began to droop at the ends of the branches, early in June, and now are only melancholy looking objects—dead almost down to the root.

We have pointed out what seems to us the most rational theory of this fatal form of blight. Our proposed preventive will be thoroughly tested in these two orchards affected by it during this coming winter, and we beg our correspondents also to give it a fair trial in various parts of the country, and let us know the result. This or any other remedy, which may prove successful, will not only save large orchards already planted, but will induce the planting of thousands of pear trees in sections where orchardists are only prevented from extensive planting by the frozen-sap blight.

* We presume all our readers are familiar with the effect of the solar rays upon bodies of different colours, exposed to the sunshine in winter. But it may not be amiss to repeat here Dr. Franklin's experiment:

"On a winter's day when the ground is covered with snow, take four pieces of woollen cloth, of equal dimensions, but of different colours, black, blue, brown and white, and lay them on the surface of the snow, in the immediate neighborhood of each other. In a few hours, the black cloth will have sunk considerably below the surface; the blue almost as much; the brown evidently less; and the white will remain precisely in its former situation."

To the above we also add the following:—"Dr. Watson, the present Bishop of Landaff, covered the bulb of a thermometer with a black coating of Indian Ink, and the thermometer presently rose 10°."—*Greg. Dic. Arts and Sciences.*



THE FASTOLFF RASPBERRY.

The Fastolff Raspberry, we are gratified to be able to say, now that it has borne two years in this country, is worthy of all the praise that has been lavished upon it. It is large, handsome, prolific, and of most excellent flavor.

This new English variety was first brought into notice in December, 1842, by the Messrs. Youell, of Great Yarmouth, Norfolk, England. It is stated by them to have been known and cultivated in the neighborhood of Yarmouth, near an ancient pile called *Fastolff Castle*, for several years previously. It is evidently a large and improved variety of the true Dutch Red Antwerp, and it received its name from the old castle near which it was at first well known.

The Fastolff Raspberry has been the prize fruit at all the leading horticultural shows in England since it has been introduced into cultivation there. There is no doubt of its bearing off the palm in the same manner in the soil and climate of the United States. It seems stronger and rather hardier than the large Red Antwerp, which it most nearly

resembles, and its fruit is larger and higher flavored than that of the Franconia. Both these varieties will, however, hold their place in our gardens, because they are sorts of great merit; but we are inclined to give the Fastolff the first rank for large size and productiveness.

The fruit, as will be seen by the preceding drawing, is much more roundish, or *obtusely* conical, than that of the true Red Antwerp. The canes are also stouter, more upright, and the leaves rather longer and more pointed. It has the excellent habit of ripening its berries in long continued succession. Its cultivation is of the easiest kind, as it grows in any good garden soil. To raise the largest fruit, however, and to secure a supply for several weeks, the ground should be trenched and manured two feet deep before planting it. April is probably the *best* time for transplanting it in this latitude; though October and November are favorable months.

The Fastolff Raspberry ripens about the same time as the large Antwerp. With us it was in perfection this season about the fourth of July. Its luxuriant habit, large size and good flavor will soon make it widely known in own gerdens, as it is undoubtedly the greatest acquisition of the last twenty years to this class of midsummer fruits.

SUMMER PRUNING THE GRAPE VINE.

Almost every one having a garden, cultivates a grape vine. If he cannot grow a Black Hamburg or Muscat of Alexandria, under glass, in such a way that a single cluster will weigh five pounds, he can at least raise that hardy and prolific native sort, the Isabella, in such abundance that a single root will give him every year fifty pounds of fruit.

This is the month when that which is commonly known as the summer pruning of the grape vine takes place, all over the country. (We confine our remarks now chiefly to hardy grapes.) The native grapes are very luxuriant growers; they make every season of life to themselves a great mass of foliage; and the almost universal practice is to cut off, when the grapes are about the size of peas, every shoot, two or three joints beyond the outermost bunch of grapes.

This is done under the impression, first, that to leave so much young wood and foliage is to rob the growing fruit of its fair supply of food; and second, that every bunch should be well exposed to the sun, in order to assist it in coming to full maturity. We ourselves practised this mode of summer pruning for several years, even after we had doubts of its propriety, and were frequently disposed to lay to its charge the diminished size of the grapes, of which we are now confident it was the cause.

In 1843, our attention was attracted by an article from the able pen of Dr. Lindley, on this subject. It began with the following propositions:—

"(1.) If all the leaves which a tree will naturally form, are exposed to favorable influences, and receive the light of a brilliant sun, all the fruit which such a plant may produce will ripen perfectly in a summer that is long enough.

"(2.) If all the leaves of a tree are exposed to such influences, all its fruit will advance as far towards ripening as the length of the

summer will admit of; it may be sour and colourless, but that condition will be perfect of its kind.

"(3.) But if all the fruit which a healthy tree will show is allowed to set, and a large part of the leaves is abstracted, such fruit, be the summer what it may, will never ripen.

"(4.) Therefore, if a necessity exists for taking off a part of the leaves of a tree, a part of its fruit should also be destroyed.

"(5.) But although a tree may be able to ripen all the fruit which it shows, yet such fruit will neither be so large nor so sweet, under equal circumstances, as if a part of it is removed; because a tree only forms a certain amount of secretions, and if those secretions are divided among twenty fruits instead of ten, each fruit will in the former case have but half the amount of nutrition which it would have received in the latter case.

"(6.) The period of ripening in fruit will be accelerated by an abundant foliage, and retarded by a scanty foliage."

Dr. LINDLEY stated, that he considered these propositions as the expression of general truths, applicable to all cases, but especially to the vine. If they were founded, as he believed, in well ascertained laws, then the rigorous summer pruning of the vine is totally wrong. He recommended, on the contrary, that not only should the whole crop of leaves be unpruned, but that the lateral shoots, always hitherto removed, should be allowed to remain; because "all those laterals, if allowed to grow, would by the end of the season have contributed somewhat to the matter stored in the stem for the nutrition of the fruit; because the preparation of such matter would have been much more rapid; and because the ripening of the fruit, which depends on the presence of such matter, would have been in proportion to the rapidity of its formation."

"It is a mistake," continues he, "to imagine that the sun must shine on the bunches of grapes in order to ripen them. Nature intended no such thing, when heavy clusters were caused to grow on slender stalks, and to hang below the foliage of branches, attached to trees by their strong and numerous tendrils. On the contrary, it is evident that vines naturally bear their fruit in such a way as to screen it from the sun; and man is most unwise when he rashly interferes with this intention. What is wanted is the full exposure of the *leaves* to the sun; they will prepare the nutriment of the grape—they will feed it, and nurse it, and eventually rear it up into succulence and lusciousness."

Struck at that time with the soundness and the force of this reasoning, we immediately put in practice the suggestions it contained. We abandoned, for the most part, summer pruning on our vines, and recommended it verbally to many others. The result of three years' trial has fully convinced us, and we believe all others who have tested it, of the entire superiority of the grapes, both as regards maturity and the weight of the crop, in all cases where the common and severe system of summer pruning is abandoned.

All that we find it necessary to do now, with grapes in the open air, is, at the beginning of July, to go over them and tie up to the trellis or frame, all rambling shoots. If, from any neglect at the season of winter pruning, or when the buds were thinned in May, too many young shoots have been suffered to grow, a few of them may be cut out, close down to the point where they start, taking off the whole branch—fruit and leaves. The remaining branches and leaves will then be able to provide

nutriment for themselves. It should, however, be remarked, that if the winter pruning and the spring disbudding have been properly done, no summer pruning whatever will be necessary.

"But," says some person accustomed to cutting off half a cart-load of foliage from his hardy vines every July, "what am I to do with the mass of foliage, running into a wild wilderness, that I find upon my vines every midsummer. It would smother the grapes."

We answer, provide against it by pruning back the side spurs or shoots, close to the leading canes, every winter. And in the spring, when several buds start out from the same place to make the current season's wood, rub off all but *two*. In this way you will prevent the vine from producing too much wood, or more fruit than it can properly carry; and you will also allow the shoots that form the current year's growth, to produce and retain all the foliage which it is possible for them to do, in order that the grapes which they bear may have the utmost supply of nutriment.

We cannot better conclude these remarks than by the following paragraph from Dr. LINDLEY's article. It relates to *autumn* pruning, and is as much to the point here as in England:

"When, however, the branches have grown for many weeks, and are in the autumn beginning to slacken in their power of lengthening, theory says it is then right to stop the shoots by pinching off their ends, because after that season newly formed leaves have little time to do more than organize themselves, which must take place at the expense of matter forming in the other leaves. *Autumn-stopping* of the vine shoots is therefore not only unobjectionable, but advantageous; for the leaves which remain after that operation will then direct all their energy to the perfection of the grapes."

We have elsewhere stated, that we consider the simple *upright trellis* in every respect preferable to the *arbor*, for training hardy grapes. Too much sun we have never known, even in our hottest seasons, for the grape; and the leaves are so much more perfectly exposed to the sun on the trellis, where it can reach them on both sides, than upon the arbor where it can only touch upon one side, that the crop of grapes in the former case is always, other circumstances being equal, incomparably larger and finer.

ON THE CULTIVATION OF THE LILY TRIBE.

BY JOSEPH BRECK OF BOSTON.

As the proper time for transplanting the Lily family is near at hand, it may not be out of season to offer a few remarks in relation to the various species and their cultivation.

All the species of this splendid genus with which we are acquainted, may be considered worthy of a place in every good collection of plants.

Some of the species are well known, while others are rarely seen in our gardens.

The Lily is interesting to the young student in botany as well as to the florist, on account of the simplicity of its structure, and the magnitude and distinct character of its different parts and organs. In the Linnæan system it is found in class Hexandria, order Monogynia. It is the type

of a most interesting order in the natural system of Jussieu, (the *Lilaceæ*,) embracing many plants with flowers truly magnificent.

The root of the Lily, or what is generally denominated the root, is a scaly bulb, the scales being laid over each other in an imbricate form, enclosing the germ or bud. The bulb is not a root strictly speaking, but a bud containing the embryo of the future plant. The roots are thrown out from the bottom of these bulbs or buds, and unlike the fibres of the tulip bulb, are perennial, and on their strength depends, in a great measure, the vigor of the future plant. During the process of the growth and inflorescence of the plant, new buds are formed side by side of the old bulb, which are matured sufficiently to push their leaves soon after the flowering of the mother plant is over, and it begins to exhibit signs of decay in its foliage. This is the proper time to divide and transplant the bulbs. The different species of Lilies will all be ready to take up in the month of August; some earlier, and others later, according to their time of flowering.

In the cultivation of border flowers generally, it will be found that they thrive best in well pulverized rich soils, such as are neither too heavy nor too light. The Lily will do well in any well prepared border. By a well prepared border, we mean one that has been trenched, and bountifully supplied with decomposed stable or barnyard manure, composted with peat or swamp-muck. If the soil was of a heavy character, a suitable quantity of sand should be mixed with it, or if too porous and light, soil of an opposite quality ought to be incorporatod with it. Ground thus prepared is in order to receive not only Lilies, but other bulbous roots and plants. On no account should the removal of lilies be deferred until the leaves begin to push, for in that case the bulbs are very much weakened, and their flowering may be prevented for a number of years. Care should be taken not to break the fibres attached to the bulbs.

The bulbs of strong growing Lilies should be planted from four to five inches deep, and weaker sorts from three to four inches. It will be found beneficial to imbed the bulb in sand. In the borders, three bulbs of the stronger growing varieties, are enough for one group, and five of the weaker sorts. They have a pleasing effect when planted in masses. Most of the species are perfectly hardy, and it is not absolutely necessary to give them any protection in winter; but all will bloom more strongly, provided they receive a covering of litter or rotten manure.

LILIUM CANDIDUM, *The Old White Lily.* This species has always been considered the emblem of whiteness, and is too well known to require any description. A mass of white lilies is always beheld with admiration,and they perfume the air with their delicious fragrance. The White Garden Lily cannot, therefore, be dispensed with by the lover of flowers. In strong ground, it grows three or four feet high, and is in flower about the first of July.

LILIUM CANDIDUM, FLORE PLENO. This is a double variety of the white: but no one will cultivate it for its beauty. The inflorescence appears to be a continuation of the foliage, which as it terminates the stem, gradually assumes the character of sepals or petals, with the whiteness of the simple flower. It is a curious monster, and for that reason may be fancied by some.

LILIUM CANDIDUM FLORE STRIATO, *the Variegated White Lily*, is another variety of the common white. The purity of the white is destroyed by the dull purple stripes that mark the petals, and give the impression that the flower has been soiled.

LILIUM CANDIDUM, FOLIA VARIEGATA. There are two varieties of White Lilies with striped leaves, one having gold, the other silver striped foliage; both pretty in a collection.

Fig. 19. *The Long-flowered White Lily.*

LILIUM LONGIFLORUM, or *Long-flowered White Lily;* sometimes called *L. Japonicum.* This is a beautiful species, and although it has the reputation of being rather tender, requiring the protection of a frame, stood uninjured in the open ground the past winter, without any other covering than a little sea-weed. The flowers pure white and very large; corolla tubular, campanulate; leaves scattered, lanceolate; stem smooth; height, 2 feet. Flowers in July.

LILIUM MARTAGON, *Turk's Cap Lily.* Of this species of Lily there are a number of varieties, as white, purple, spotted—all desirable and beautiful. The petals are very much reflexed; corolla revolute; leaves whorled, ovate-lanceolate. In strong soil, where the roots were well established, we have seen this variety throw up stems three to four feet high, each stem producing 20 or 30 flowers.

LILIUM UMBELLATUM, *the Umbel-flowered Orange Lily.* A strong growing species, producing quite a number of large upright orange flowers, with rough interior; leaves scattered. In contrast with the white lily, it makes an imposing appearance. It commences flowering about one week earlier than the white.

LILIUM AURANTICUM, *Dwarf Orange Lily.* Flowers upright, rough inside, 2 or 3 only found on one stem, which grows to the height of two feet. Leaves lanceolate. A very pretty variety.

LILIUM TIGRINUM, *Tiger Spotted Lily.* A very strong growing common variety, but very showy, with fine reflexed orange flowers with black spots. Corolla revolute, papillose inside (covered with fleshy points or protuberances). Leaves scattered, sessile, 5-nerved, the upper cordate-nervate. It has the peculiarity of producing bulbs in the axil of the leaves. Grows from 4 to 6 feet high. Having the faculty of producing not only from off-sets, but from the small bulbs, it makes itself too common. It is a suitable plant for the shrubbery as well as the border.

LILIUM POMPONICUM, *Scarlet Pompone Lily.* This is a beautiful variety, with scarlet reflexed flowers: corolla revolute, toothed and warted inside, leaves scattered, linear-subulate; two feet high. Flowers in June and July.

LILIUM CHALCEDONICUM, *Scarlet Martagon Lily.* This is another fine scarlet lily with reflexed flowers, growing to the height of 3 or 4 feet, and flowering in July and August. Leaves linear-lanceolate, scattered; corolla revolute, dotted inside.

All our native lilies are beautiful, and very much improved by cultivation. While we are bringing together from the ends of the earth the treasures of Flora, let not our own be neglected.

LILIUM SUPERBUM, *Superb Lily.* One of the most magnificent of our native plants.

Not found we believe in the vicinity of the city, or rarely in this state. We have seen it in New-York, and farther south. Stem erect, straight, from three to six feet high, bearing a large pyramid of orange coloured flowers, amounting, not unfrequently, to thirty or forty in number. Leaves lance-linear, three-nerved, glabrous; lower ones whorled; upper ones scattered; flowers in a pyramidal raceme; corollas reflexed. There appears to be a variety in the colours from a yellow to an orange scarlet.

LILIUM CANADENSE, *Nodding Meadow Lily.* The character of this lily when cultivated, is very much improved, and when in rich ground approaches the character of *L. superbum.* The colours vary: varieties may be found from light yellow to orange, and nearly to a scarlet. A great portion of our meadows are embellished with this flower in the month of June. Stem green, varying in height from one to three feet, with lanceolate leaves surrounding it in distant whorls; flowers from one to three or even more, on terminal peduncles; corolla nodding, bell-shaped, spotted inside; petals lanceolate, turned outward, but hardly reflexed. In the garden we have seen this lily growing four or five feet in height, graced with at least twenty of its beautiful pendulous flowers.

LILIUM PHILADELPHICUM, *Common Red Lily* of our pastures and dry fields. Of equal beauty with the *canadense*, but of different habit. Its height rarely exceeds two feet; leaves whorled, a few sometimes scattered. Flowers, one, two or three, supported on a long claw, upright, of a dark vermillion colour, spotted; corolla bell-shaped. The character of this species will no doubt be as much improved as *canadense*, by cultivation. It will then form one of the most showy ornaments of the garden, as the colour of the flowers is rich and brilliant. If ten or fifteen can be produced on one stem, the effect of a group of plants will be surpassingly rich.

We have succeeded in transferring our indigenous lilies from the fields or meadows when in flower, by taking up a ball of earth with the roots.

Among other beautiful species and varieties in this interesting order, are *L. catesbæi*, a native of the south, with orange coloured flowers, and dwarf in its habits; *L. carolinianum* from Carolina, somewhat like *superbum; L. pyrenaicum*, with reflexed dark orange flowers, from the Pyrenees; *L. monadelphum*, a species of martagon from the Caucasus; *L. croceum*, *pumilum*, and many others, which may be obtained from the Dutch florists. Lily bulbs, when transported across the Atlantic, will hardly flower the first year, even when conveyed in the best condition. more than one-half usually perish when packed in the best order. These bulbs should be planted as soon after taking up as possible.

In addition to the varieties described, some splendid species or varieties have been recently introduced from Japan, which are to be found in a number of collections in this vicinity, viz., *Lilium speciosum* and *lancifolium-album.* We are indebted to Dr. Van Siebolt for this magnificent acquisition, who brought them from Japan to Europe. These bulbs have commanded an extravagant price. But one individual, to our knowledge, has tried them in the open ground in this neighborhood; we understand they stood the winter with some little protection. Should they prove hardy upon further trial, they will be eagerly sought after, as they surpass in beauty and fragrance every other species or variety in this extensive family of plants. *L. speciosum* has a pink and white frosted ground, finely spotted with a deep crimson; *L. lancifolium*

album is a pure white: each variety with reflexed petals. Hybrids have been produced between these species, and a number of new varieties have been obtained, all exquisitely beautiful. We have seen specimens, four or five feet high, with over twenty buds and flowers.

I have thus given a faint description of most of the Lily family that have come under my observation. They are all beautiful, easy of cultivation, and will give much satisfaction to the florist when well managed. JOSEPH BRECK.

Boston, June 30, 1846.

NEW MODE OF RIPENING FOREIGN GRAPES.

DEAR SIR—I send you an engraving of a novel kind of bell-glass, much used in Holland for ripening the finer sorts of grapes in the open air. The following account of it may also interest your readers, for which I am indebted to the *Horticultural Review* of Paris.

This bell-glass has an opening at the top, with its edge turned over in the form of a collar. After it is slipped over the bunch of grapes, it is held in its place by a wire, which is passed round the collar, and then fixed to the nearest part of the trellis or vine branch. The cluster is usually introduced into the bell-glass as soon as the grapes are well formed, though it is often delayed as long as possible; that is, till the bunch is in danger of growing so large, that it will not enter the opening in the upper end of the bell.

Long experience, it is said, has thoroughly proved the good effect of this kind of bell-glass in the climate of Holland. There, one often sees an hundred, and not unfrequently several hundreds, in use at once, on the same line of grape espalier. In them, grapes, which will not ripen at all in the open air, mature and attain an excellent flavor.

The air, it will be seen, circulates freely through these bell-glasses, as the openings at both ends are left open. Insects of all

Fig. 20. *The Dutch Bell-glass.*

kinds, it is stated, will not remain under these bell-glasses, and the grapes enclosed in them are consequently left entirely untouched by the numerous flies and wasps, which usually prey upon them when exposed. No sooner does a wasp approach the enclosed bunch of grapes, than he takes flight again, probably alarmed at the

noise made by his own wings under the glass.

Such is the account received from Holland, of this mode of ripening grapes. I understand that these bell-glasses can be blown at our glass-works, and afforded at low prices by the dozen. Their value will no doubt be tested by some of our amateur cultivators, who would like a couple of dozen clusters of choice Frontignan or Hamburgh grapes every year, without the expense of a vinery. VITIS.

P. S. I ought to add the dimensions of the Dutch bell-glass. Its height is about nine inches; the opening at the bottom six inches; that at the top two inches.

New Mode of Growing Early Sea Kale and Rhubarb.

BY R. W. T., OF PHILADELPHIA.

SIR—I have a mode of raising an early crop of Rhubarb and Sea Kale, which gives me these two vegetables a fortnight earlier than my neighbors, and which I will, with your permission, lay before your readers.

About five years ago my workmen were engaged in draining a large piece of low bog meadow. When the ditches were made, a goodly quantity of fine mellow black peat, was thrown out. I had this carted into my kitchen garden. A couple of dozen loads, which were not used in the autumn, were allowed to lie all winter. In the spring, very early, I found to my surprise, that a pretty thick coat of the black earth had by accident, been left on one end of a bed of Sea Kale.

It was at least a fortnight before the usual season for cutting either this vegetable or Asparagus. But already I beheld fine strong shoots of the Sea Kale, pushing their heads above the dark surface of the peat. Indeed, I was then able, from three or four hills, to cut as fine a dish of this vegetable as I ever tasted. It was very finely blanched, and remarkably tender and fine flavored. The roots in that portion of the bed, alongside, that had not been covered by the black earth, did not begin to grow till many days afterwards.

You may easily suppose that I took advantage of this excellent, though accidental, hint. The November following, I covered my whole bed of Sea Kale fourteen inches deep with the peat earth. I was able to commence cutting the shoots, for boiling, the next spring, long before my neighbors; and the size and flavor were certainly all I could desire. I had been in the habit, like most of those persons who raise this esculent, of heaping up a mound of sand every spring, over each hill of Sea Kale. I have now altogether abandoned that way of blanching the stalks. I find the peat a far superior substance for this purpose. Its dark color draws the heat of the sun, and retains it, thus forwarding the growth of the shoots much more than the sand, which has not this quality. I think also, that the heavy coat of peat laid over the bed in autumn, keeps the frost pretty well out of the ground below it, so that the roots are in a fit state to be excited into growth by the first bright weather in March.

Since I have found the value of the peat earth for raising early blanched Sea Kale, I have also tried it with Rhubarb. Upon this vegetable it acts equally well. I cover the crowns of Rhubarb, in the fall, about 18 inches deep, with the black peat soil, heap-

ing it up in the shape of a flattened cone or hill. From such hills I am able to cut nice blanched stalks in abundance, at least twelve or fourteen days before the roots in the open quarters afford me any stalks. Those who like a fine early tart, will not think this too much trouble to obtain it.

I should also mention, perhaps, that as soon as the season for cutting those plants is past, I draw away all the covering of peat, mix it with my compost heap, or apply it to any part of the garden in need of it. The beds are then dressed and dug as usual, and the plants left to make their summer's growth. I generally dig in a dressing of manure in the autumn, before I cover the beds with the peat.

If your readers will make a trial of this way of raising very fine early Kale and Rhubarb, I am sure it will meet with their approbation. R. W. T.

Remarks.—We commend this article to the attention of every one having a kitchen garden.

We will only add to the excellent directions for raising early Sea Kale, our surprise that this really delicious and invaluable vegetable is seen in so few gardens in the United States. It is not in the least inferior to Asparagus, to our taste, and it is served to the table much in the same way. Coming at the same time, among the very first of spring vegetables, it is doubly welcome from the scarcity of almost all esculents at that time.

Nothing can be easier than the cultivation of Sea Kale. Any common garden soil that will yield a cabbage, will produce it; once planted, it gives a regular supply for the table every spring, and ought therefore to have a place even in every cottage garden.

The seeds of the Sea Kale may be sown in October or April. Dig the ground thoroughly, and sow them about an inch deep, and at such a distance as to leave two or three roots in a place; the drills about 16 or 18 inches apart.—Ed.

DESIGN FOR A RUSTIC GATE.

BY RUSTICUS.

Dear Sir—I send you a little sketch of a rustic gate which I have erected this season, and which, though very simple, has been a good deal admired by those who have seen it.

The roof, or canopy over it, is, as I have ascertained in a previous case, a most useful addition, since by guarding the gate itself to a considerable degree from the storms, it prevents it from getting out of repair.

This gate stands at an angle in the boundary lines, at the entrance to a little wood. Its rustic and sylvan character agrees well with the situation in which it stands.

Indeed, rustic work of all kinds is extremely pleasing in any situation where there is any thing like a wild or natural character; or even where there is a simple and rustic character. In the immediate proximity of a highly finished villa, it strikes me that rustic work, such as arbors, fences, flower baskets and the like, are rather out of place. The sculptured vase of marble, or terra cotta, would appear to be the most in keeping with an elegant place of the first class; that is to say, for all situations very near the house. In wooded walks, or secluded spots, rustic work looks well always.

It seems to me that the danger is, that

rustic work, like every thing else, gets into fashion, and then the whole good taste of the country grows mad about it. All sorts of foolish and ridiculous extravagances are indulged in it. One of my neighbors is a victim to this mania at the present moment. His gardener has made him a rustic basket in the form of a game cock, and planted its head with scarlet verbenas, and its tail with purple petunias: and the employer, who has not a very severe taste, shows it to all his visitors as something worthy of universal admiration! There are very few places that I have ever seen, that would bear even a little of this sort of grotesqueness. Any place, however fine, would be ruined in effect by much of it.

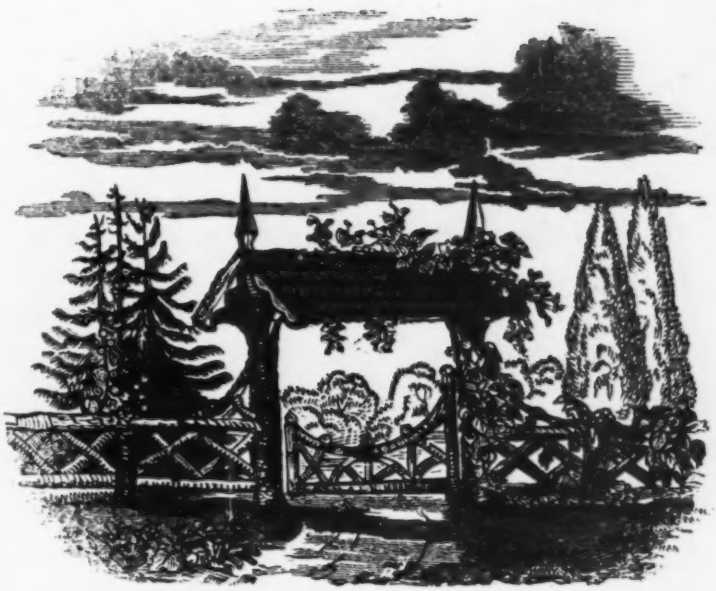


Fig. 22. *Design for a Rustic Gate.*

Rustic work is very perishable, if it is made of little bits of rough branches of any kind that are picked up in the forest after the wood-chopper. On the other hand, if it is always made of the branches of the common Red Cedar, so abundant in most parts of the country, it will last a long while, and prove both strong and serviceable.

RUSTICUS.

THE CARNATION, ITS HISTORY AND CULTURE.

BY AN AMATEUR FLORIST.

I. ITS HISTORY.

I TRUST you are an admirer of my favorite flower the CARNATION. Not because you are bound, *by virtue of office*, to patronize all Flora's favorites, but that it is really and *per se* worthy of universal admiration. What, indeed, is more beautiful, or more fragrant than a collection of the finest varieties, comprising all gay and beautiful hues, and all the odorous richness that belongs to the spice groves of the East.

Dianthus (διος ανθος of the original Greek) signifies, literally, *Jove's Flower*, or the *Divine Flower*. This name, bestowed on the genus to which the Carnation belongs, may be taken as a proof of the favor in which it was held a long time ago. How the popular name *Carnation* came to be bestowed, the floral historiographers have not told us. Perhaps it was given in allusion to the peculiar flesh-coloured hue of some of the plainer sorts—likely enough to have been the first kinds known; *caro*, *carnis*, being the Latin term for flesh. Indeed Steevens says, that so long ago as before the time of Shakespeare, *Carnardine* was the familiar name of the flower. I find it thus used in an old play of that era:

"Grograms, sattins, velvet fine,
The rosy coloured *carnardine.*"

Drayton, the poet, indeed, also gives me warrant for this interpretation:

"The brave *carnation*, then with sweet and sovereign power,
So of his *colour* called, although a July flower."

I like to look into the primitive history of my garden favorites. It is more agreeable than searching genealogical trees and tables of ancestry; for the flowers go on improving every generation, while the descendants of great men often grow "small by degrees, and beautifully less."

The English and the Dutch have always had quite an enthusiastic passion for my favorite flower. You remember, no doubt, what that most delightful old essayist, the Spectator, thinks it necessary to say:

"Some professed florists make them their constant study and employment, and *despise all fruit; and now and then a few fanciful people spend all their time in the cultivation of a single tulip or a carnation.*"

I am afraid this last sentence conveys an idea of a devotion far greater than even my own.

The Carnation has been the favorite, however, of more celebrated personages than the "professed florists." The illustrious Condé, great as a general and as a prince, while he was a state prisoner in the gloomy Bastile, amused himself in cultivating this charming plant. Indeed a French poetess, Mademoiselle de Scuderi, has commemorated the fact in one of her verses:

"En voyant ces Œillets, qu'un illustré guerrier
Cultive d'une main qui gagné des battailles,
Souviens-toi qu' Apollon a bâti des murailles,
Et ne t'étonne plus que Mars soit jardinier."

The Carnation is said to be a native of middle Europe. It is quite doubtful if the ancients knew it at all, as there is no allusion to it in any of the classics. But it has been, for a great length of time, a favorite with all Germany and the north of Europe.

That good old botanist and herbalist, Gerarde, first introduced it into England in 1597. He quaintly tells, that in his time it was in great esteem "to deck up the bosoms of the beautiful, and to make garlands and crowns for pleasure."

Since Gerarde's day, the Anglo-Saxons have by no means neglected the Carnation. Within the last fifty years, some of the leading English flower fanciers have enumerated 300 or 400 sorts in their catalogues. The perfection to which their culture is carried, quite astonishes one. Indeed they are most tenderly nursed. They are always kept in pots full of the most carefully ordered composts; they are closely watched at all times, but especially when approaching the blooming season. Then the buds are thinned out as soon as they are well formed; the flower-stems are supported by neat and slender green stakes; the opening blossoms are prevented from turning awry by pieces of card placed beneath them; and at length, the expected time having arrived, the whole collection is placed under a tasteful awning upon stages, the plants rising one above another to show all of them to the best advantage. It is quite impossible to imagine anything finer than the "gay confusion" that meets the eye when such a display is in its perfection.

II. ITS CHARACTER.

THE Carnation, in its most perfect state, is known to florists in three principal forms, viz., the *Flake*, the *Bizarre*, and the *Picotee*.

The *Flake* is distinguished by being striped, with pretty regular well marked bands or stripes of two colours only on a white ground. (Fig. 23.)

The *Bizarre* (from the French *bizarre*, odd, irregular) is characterized by having

Fig. 23. *The Flake Carnation.*

irregular stripes of three colours on a plain ground. (Fig. 24.)

The *Picotee* (from the French *piquettée*, pricked or spotted,) differs entirely from the foregoing. They are usually bordered with a narrow *margin* of some dark colour, or are dotted with a great number of minute spots. The flowers are usually smaller, and the plants much hardier than the Flakes and Bizarres. The edges of the flowers in Picotees are generally serrated or cut, though in the finest specimens they are often nearly even. This class affords the greatest variety of colour, both in the ground and the spots or pencillings,—yellow, purple, lilac, white, crimson, &c. (Fig. 25.)

The fine points in a carnation are these. The flower stem must be strong and erect, the calyx must open regularly and without

Fig. 24. *The Bizarre Carnation*

bursting, and the petals must be symmetrically disposed.

Fig. 25. *The Picotee Carnation.*

In Flakes and Bizarres, the petals must be large, rounded on the edges, and regularly disposed. The ground colour must be clear and pure. The stripes must be

distinct and well defined. In Picotees, the margin colour should be narrow and well defined; the pencilling or dotting should radiate from this to the centre, and should be clear and distinct.

III. ITS CULTURE.

Why is it we so seldom see a good collection of carnations in our gardens? This question is answered by most persons, by saying that the climate does not suit them. I am inclined to think this a mistake. In Germany the Carnation is raised in very great perfection, and the climate there is exceedingly like our own.

I am well convinced that it is not the climate. I am also pretty confident that it arises from the too trifling care bestowed on this plant.

The Carnation is treated by most persons like a common Pink, or hardy border flower. I am sorry to say, that with this treatment it will not succeed here, and does not succeed either in England or on the Continent. There are, to be sure, some few hardy kinds, and among them the Picotees figure largely, which will answer very well in the open border, with a slight covering in winter. But to have a good variety of the best Carnations, they cannot be grown otherwise than in pots.

And are they not more truly worthy of this care than most of the poor starved things that figure among green-house plants? Half the care bestowed at the present day, by the numerous admirers of the Fuchsia, would afford us the most charming and perfect Carnations.

Well then, I must commence by saying, that as good a soil as need be for this plant is made by observing the following proportion, viz., two barrowfuls of fresh loamy soil (or, what is much better, the soil made by rotting down sods,) two barrowfuls of thoroughly rotted stable manure—that from a spent hot-bed is excellent, and one barrowful of clean sand. Mix the whole very thoroughly together, throwing out the lumps, but not sifting it. You may, if you please, sift a small quantity to place on the top of the pots.

I shall speak of the propagation of this plant directly. I am now supposing the layers to have rooted sufficiently to be taken off, which they usually are about the first of September. You must then separate the layers from the old plant with a knife, lift them with a transplanting trowel, trimming off carefully any decayed or broken parts, and pot them in the soil already described, in half pint pots, one plant in each pot. Use bits of charcoal for the drainage—in other words, for covering the hole in the bottom of the pot.

The pots should all be placed together, in a cool and rather sheltered position, where they can be shaded for ten days. The plants must be pretty liberally supplied with water from this time till the middle of October, when they will be well established in the pots.

Next, for their winter quarters. This, though simple enough, is yet a matter of great importance; for unless it is carefully attended to, you may lose your whole stock in one winter's day.

The best way of keeping the Carnation through the winter, is in a common hot-bed frame with glass lights. Such a frame, three feet by eight, will hold a great many of these pint pots, each holding a young rooted plant.

Now, the great points in keeping the Carnation through the winter, are, to keep it cool and dry, and in such a condition that it will not be exposed to sudden changes of weather. A severe frost will not hurt it at all, if the plant is kept quite shaded in the

frame till it has had time to thaw out *very gradually*.

The most successful mode of keeping this plant in winter is pursued by a friend of mine, and is as follows: He chooses a common hot-bed frame, and sinks it nearly even with the surface of the soil, or at least not rising more than three inches above it, in a cool, rather shaded, *northern* exposure. He takes out the soil in the frame, about ten inches deep, makes the ground quite level and hard with a pounder. Then he cements the floor over with cheap common mortar, made of lime and loam mixed with some coarse sand. This he lays on about an inch or two thick, bringing it up snugly to the sides of the frame all round.

The advantages of this hard mortar floor are great. It keeps the plants quite free from the bad effects of accumulated dampness, which gathers in a common frame when the pots are set on the earth. Hundreds of Carnations die off suddenly in winter from this cause, and the grower is unable to account for it. On the mortar floor they are always dry; besides this, it prevents mice from getting in the frame. These little animals are very fond of Carnations, and will, if they find their way into a collection in winter, soon devour a great number.

The frame being ready, the plants are moved into it about the middle of October, or as soon as the nights become frosty. For some days, or in short till severe weather sets in, the lights need only be put on the frame at night. In the mean time water the plants moderately, as often as they appear dry. As soon as winter commences, shut up the frame with the lights. Upon the top of these place two layers of matting, and over all lay a large shutter or cover of rough boards.

Here they will remain till the spring opens. I think it best never to open the frame during severe freezing weather. On all fine mild dry days, during the winter, you may admit air freely to the plants, but never the sun. Raise the glass, and replace the shutter for a few hours to keep out the sun's rays. They will need but very little water during the winter, unless the weather is very mild. When, by the pots appearing dry, you observe that they do need it, supply them very sparingly. If they are kept shaded and cool, they will make little or no demand for water during the winter.

If these directions are followed, you will find your plants in excellent healthy condition at the opening of the spring. When this season comes round, admit air at the beginning plentifully, but do not let in the sun all at once, only by degrees, till the plants are able to bear it.

At the beginning of April, they must all be shifted into larger pots for blooming. The soil that should be used, I have already spoken of. I will only add, that in potting the Carnation, *the earth should always be pressed down quite firmly* around the plant with the fingers. Experience has proved to me that this is quite an essential point.

In July you will have the satisfaction of seeing your plants come into full bloom—and a sight of rare and wonderful beauty it is, if the collection is a large one. Before this time, you will have tied up every strong flower stem to a neat small stake, and you should have taken the precaution to pinch off all superabundant, weak or unnecessary buds, leaving only the strongest. The latter will then have all the juices of the plant to support them, and will come out surprisingly rich and perfect.

IV. ITS PROPAGATION.

About the middle or last of July, the beauty of the bloom will be over. Now

commences the layering, to furnish a stock of plants for the next season. New varieties of the Carnation are produced from seed; but this is a tedious process, as only one seedling in ten thousand ever turns out a first rate flower. Layering is, therefore, the mode adopted for continuing all sorts of established reputation.

It is indeed quite a simple process. The annexed cut will give a good idea of it. The strongest and longest of the young

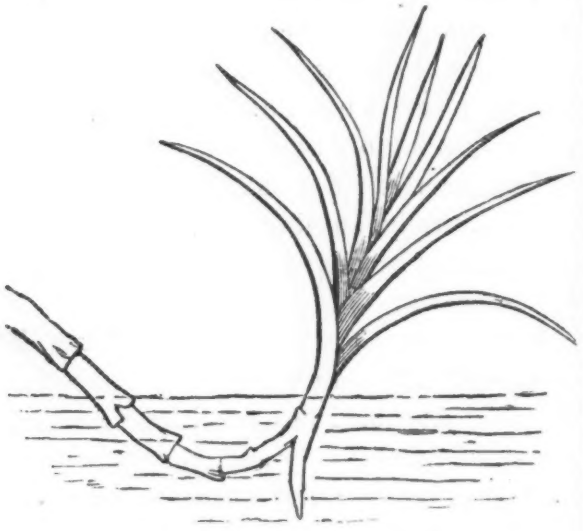


Fig. 26. *The Layer of a Carnation.*

shoots (called the *grass*) are selected. Make a small furrow in the loosened soil of the pot; bend down the shoot to find what part will be covered in the furrow; then carefully strip off the leaves of the portion to be buried. With a sharp penknife make the tongue or incision, commencing just below a joint, halfing the stem by an oblique cut upward, the incision extending about an inch. Next, with a small hooked peg, fasten down the shoot in the furrow, burying the incision not more than three-fourths of an inch. Cover the whole with a little fresh soil, which should be pressed gently around the shoot, holding the top of the shoot that remains out in a nearly upright position. Give it a little water, and the whole is complete. Every evening afterwards, the layers should be regularly moistened. In about six weeks they will be ready for potting, as I have already described. The old roots, after layering, are worth little, and are usually thrown aside.

Whoever will follow these directions, cannot fail of success in growing all the finest varieties of this very choice plant.

The Picotees, generally, as I have already remarked, may be grown with very good success in a border in the open air; and I may add a few of the hardier Flakes and Bizarres. The soil may be the same as I have already pointed out for the culture in pots. In this case, I have usually found it best to allow the layers to remain attached to the parent plant all winter—enclosing the whole bed with a rough frame, a few boards and branches of evergreens thrown over the top. In the spring, a new bed should be prepared, and the layers taken off and transplanted into it.

Trusting these remarks may have a tendency to make the culture of the Carnation more general, I remain yours.

AN AMATEUR FLORIST.

New-York, July 15, 1846.

Remarks on Stoddard's Red Alpine Strawberry.

BY J. W. BISSELL, OF ROCHESTER.

STODDARD'S RED ALPINE STRAWBERRY having attracted considerable attention in this vicinity, by its extraordinary productiveness and good size, and being worthy of extensive cultivation, I cheerfully comply with your request to send you a notice of its history and qualities.

Mr. STODDARD claimed for it, that it was

a new variety, and asked and received for his plants a price that must have amply remunerated him for all the labor and pains expended in their cultivation. This is all fair, and very encouraging to those who strive for superiority. But let us examine the claims of this berry as a new variety.

The *Alpines* are readily reproduced from the seed, not sporting like the *Pines*, and have hitherto resisted all efforts to materially improve them, and are still described as being small, conical, tender and sweet, parting readily from the stem, and yielding for a long season plenty of berries, "such as they are." Other fruits are ameliorated and improved by propagating from the very best, and cultivating with great care; this seeming to be an exception, is it not fair to suppose that hitherto it has not received that care and attention necessary to produce so desirable a result? And is not Mr. Stoddard entitled to all the credit he has received? From a stock of more than two thousand seedlings, he selected that one which fruited the best, and planted it in a bed, such as few strawberry growers ever prepared. He made it by putting a layer of stones into a bog hole, and then covering them to the depth of three feet with the finest garden mould. The result might have been inferred.

I examined the bed while in bearing last summer, as did hundreds of others, among whom was the editor of the Cultivator, who made a flattering notice in the number for last August.

On the second day of that month, I set out some of the plants in good though rather dry garden soil, dug two spades deep and well manured. Very hot and dry weather immediately succeeding, most of the plants died, while those that survived, lost all their leaves, and were in a sad condition. This spring they appeared well, and have for the past month, yielded very abundantly, and are now again loaded with blossoms and fruit, promising a good supply for at least a month longer. I have counted, at one time, more than two hundred and fifty berries and flowers on one of these hills. Thus far each blossom has produced a good berry, some of them measuring three inches in circumference.

Not a few persons are found who say that the common Alpine, if transplanted into a bed like that of Mr. Stoddard, would produce as good fruit and as much as his has done, yet I cannot hear of any one who has tried it. On the contrary, a friend informs me that he has cultivated the common in almost every variety of soil and situation during the last twenty years, and that he has never known it to compare with this. Yet this superiority may be only for a generation or two, and the berry may degenerate after a sufficient time shall have elapsed to have destroyed that peculiar stimulus it has so lately received. J. W. BISSELL.

Rochester, July 7, 1846.

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REMARKS.—We have now growing some plants of this new Alpine Strawberry, but they are not yet sufficiently established to warrant us in giving an opinion. Mr. BISSELL, however, has a very fine bed, and we learn from those who have seen it, that it proves beyond a doubt that this is really a most valuable new variety. It was feared by many persons that Mr. STODDARD'S plants, being grown in a soil of unusual depth and richness, it would not be found that the variety would sustain its character when grown in the common way. Mr. BISSEL, who is by no means an enthusiast, and who judges very slowly, has himself assured us since this article was written, that he believes this strawberry is a new and most valuable ever-bearing sort, and is really worthy of extended cultivation.

We will only add that the Alpine Strawberries are remarkably permanent in their character. There is, therefore, no fear that this sort after, having been proved of the first quality, will wear out or deterioate like some of the Pine varieties.—Ed.]

Mr. Longworth and the Strawberry Question.

We have placed the name of our friend, Nicholas Longworth, Esq., of Cincinnati, at the head of this article. The association has become a natural one, and he will not quarrel with us for awakening it at this time.

Mr. Longworth, as every one at the west knows, is one of the most liberal and influential citizens of Cincinnati. His garden has long been the richest and most beautiful west of the Alleghanies, and he pursues horticulture with an ardor that would drive a quiet man quite distracted.

Mr. Longworth, like every enthusiastic man, has his hobbies. But he is by no means content to ride them around his own grounds. Not even the state of Ohio is sufficient; although it is one of the noblest in extent of territory and richness of soil, in the Union; although it has strode onward so gigantically, that from a wilderness, inhabited fifty years ago by a few souls, it has, in this short time, grown as large as Venice, in the palmy days of that kingdom, when she was, with her two millions of souls, mistress of the world's trade. In short, our friend has used his pen so vigorously, that the reader of every agricultural paper in the country, who knows that a strawberry does not always bear fruit, knows also, that he offers freely to all, a panacea to cure its barrenness.

His two favorite topics are *Vineyards* and *Strawberries*. And however persons may differ from him in horticultural opinions, or may be inclined to take offence at the Ajax manner with which, when in pursuit of his favorite objects, he uses his weapons, cutting about in a "rough and ready" way, somewhat regardless of the limbs of friends or enemies, still it is not to be denied that he is, in the main, right, and that he has established in the eyes of the world, two most important facts: 1st, that the banks of the Ohio can produce, in great abundance, pure wines, equal to the finest wines of the Rhine; and 2d, that by his favorite mode of cultivating the strawberry—viz., by planting a due proportion of staminate and pistillate plants—double the usual crop may always be obtained; in short, that the finest strawberries, which are rather an uncertain crop, and consequently somewhat dear in our markets, may now be considered one of the most certain products of the soil—and may be raised in such abundance as to afford them, in all our markets, at an astonishingly low price.

We have never doubted the actual result of Mr. Longworth's mode, though he has classed us among the opponents of his views. We only doubted the *necessity* of it. But we trust we are neither very bigoted nor prejudiced, and we now state frankly, that having observed carefully, having experimented ourselves, and heard detailed the experiments of many sound and careful horticulturists in various sections of the country, we are ready to avow our entire assent to the practical value of Mr. Longworth's mode of growing the strawberry.

In saying this we do not wish to be understood as agreeing with all Mr. Long-

WORTH's positions in relation to the strawberry. On the contrary, we differ very widely in two or three respects. But as far as regards the practical culture of the strawberry, we do agree with him.

We will presently point out our points of difference, with regard to the sterile blossoms. For the present we wish to direct the attention of our readers to the sum total of his views, as contained in a pamphlet on "The Cultivation of the Grape, and on the Character of the Strawberry Plant," just issued and distributed by Mr. L. It contains, we presume, his ultimatum on this subject, and cannot fail to interest our readers.

We ought to preface this report by saying, that at the request of Mr. LONGWORTH, the Horticultural Society of Cincinnati, two years ago, appointed a committee of nine skillful persons, to examine, experiment and report on this subject. The committee (with the exception of two, who dissented,) have just reported (June 13, 1846,) that they entirely coincide with Mr. Longworth's views, regarding the culture of this plant.

The report closes with the following paragraphs, showing the extraordinary abundance of this fruit, which, it must be remembered, is chiefly cultivated in gardens for that market. There is no city in the world half so well and so abundantly supplied with fine strawberries, as Cincinnati. Two hundred bushels a day, during the whole strawberry season, more than equal in quantity to half a million of the little strawberry baskets offered in the New-York market!

"As further evidence," say the committee, "that this is the most successful mode for the cultivation of the strawberry, they beg to refer to the quantity of strawberries sold in the Cincinnati market this season, which were furnished chiefly by those who have adopted the system of planting female or pistillate plants, with a proportion of about one-tenth male or staminate plants, for fertilizing. The amount sold has been ascertained by a committee of the Horticultural Society. The committee reported the quantity in market, for each day, during the most productive portion of the strawberry season, commencing on the 19th of May and ending on the 12th of June, a period of 22 days, in which time they state the aggregate amount at 4,150 bushels, being an average of nearly 200 bushels per day.

"This product of fruit, compared with other markets, and the quantity of ground cultivated, furnishes conclusive evidence of the success in attending to the cultivation of staminate and pistillate varieties."

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Mr. Longworth's Paper on the Strawberry Plant.

I regret that the committee on the character of the strawberry plant, have not yet been able to make up an unanimous report. It arises from a failure of the crop with some members of the committee, and from a conviction with our European gardeners, that all varieties were perfect in both organs in Europe; and they are slow to believe the contrary. This I am positive is not the fact in England. In some soils and some climates, and in favorable seasons, such staminate plants as are partially perfect in the female organs, yield a larger crop than usual; but can never be made to bear a full crop. But in raising from seed, fully one-half will in general be staminate plants, and not one in fifty of them bear even a single fruit. Those that do bear, produce many defective berries. I do not believe that any soil, climate or season, can make the pistillate plant bear singly; and it is the only one worthy of cultivation for a crop. Of this, and of the staminate and pistillate character of the plant in England, we have positive evidence from their great horticulturist, Keen, himself. In the year 1809, (if my memory serves me as to date) Keen discovered that a new seedling of his, planted by itself, did not swell the fruit. On a careful examination of the blossom, it struck him that it might be owing to a defect in the male organs. He then placed some staminate blossoms in a phial of water, and suspended them in the bed. He found the fruit in the vicinity to swell immediately, and he placed more phials of staminate blossoms in different parts of the bed, and had a fine crop. His letter will be found in the Transactions of the London Horticultural Society for that year. What was true in 1809, will be found still to be true. I have further

evidence of the character of the plant in England. Fifteen years since I imported several varieties of strawberries from London, and among them I had both staminate and pistillate plants, but not one variety in which both organs were perfect in all the blossoms. The staminate varieties bore from one-tenth to one-third of a crop. Under the name of Keen's seedling, I got a pistillate plant, that impregnated, produces abundantly, and the fruit is large and fine. By themselves, an acre would not produce a perfect berry. It is not what, in England, is generally known by the name of Keen's Seedling. Mr. Keen raised many varieties. The true Keen is a staminate plant, and is more perfect in both organs than is usual, and produces a partial crop of large fruit. I incline to the belief, that for market, their gardeners cultivate the same seedling of his as the one sent me, and probably the same kind he impregnated by hand. It is truly a valuable kind, and worth twenty of the staminate seedlings. The staminate Keen is cultivated for forcing ; and as the object is large fruit, all the blossoms are picked off, except three or four that set first.

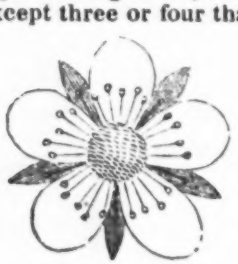

Fig. 27. *Staminate Blossom.*

But, it will be asked, if true, why is this not known to botanists and to all our nurserymen who raise the plant for sale? The reasons are obvious. The strawberry belongs to a class of plants that have both the male and female organs in the same blossom. In all the white varieties I have seen, and in the Alpines, both organs are always perfect in the same blossom. Both organs existing in all other varieties, though not both perfect in all the blossoms, the attention of botanists is not directed to it, or where noticed, is supposed to be an accidental defect. In all the other species and varieties I have seen, both wild and cultivated, I have met with one only where the defect in the one organ or the other was not apparent, and in that the fruit was very small. I have never seen a pistillate plant, (one in which the female organs predominate,) that would by itself produce any perfect fruit. Staminate plants (those in which the male organs predominate), where partially productive, generally produce the sweetest and most highly flavored fruit. In certain soils and certain seasons, Keen's Seedling, Wilmot's, the Iowa, and some other staminate varieties will produce half a crop.

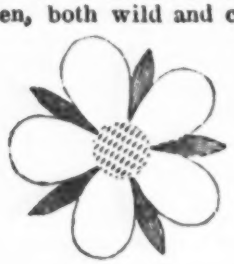

Fig. 28. *Pistillate Blossom.**

Where our horticulturists raise from seed, all the staminate plants that are entirely barren, are of course thrown away, and the few staminates that produce a partial crop of large fruit retained. A pistillate plant that, mixed with others, bears a full crop of large berries, is transplanted, as a treasure, into a bed by itself for increase. The gardener is, the next season, surprised to find it wholly barren, and, after one or two trials, throws it away.

The nurseryman, within a space of one hundred feet square, cultivates twenty or more varieties, and a large portion of them are always staminate, and impregnate the pistillate varieties. Fruit not being their object, their attention is not directed to their bearing, and the failure of a full crop in any variety is attributed to frost or accident, or its being a bad bearer. Of this we have a strong instance in Hovey's Seedling. It is eleven years since he raised this plant ; he has increased it extensively for sale. Six years since, I made known the defect in the male organs of the plant, and drew his attention to it; and asserted that an acre of them, separated from all others, would not produce a perfect berry. Till 1842, he continued to contend, and was positive that his plant was perfect in both organs. In 1842 he admitted, in his Magazine, its defect in the male organs. In 1844, he went back to his old doctrine, as will be seen by his Magazine ; and it was not till the August number of his Magazine of the present year, that his mind was again mystified on the subject. How are the mere *workies* to gain information, when the editor of a horticultural magazine, and a nurseryman, who undertakes to enlighten others, has not, in eleven years, ascertained the character of his own seedling ? I am the less surprised at this, and acquit Mr. Hovey of blame, as Mr. Downing, in a recent letter, assures me, that last season he raised a fine crop of Hovey's Seedling, on a bed far separated from all others ; and for a still stronger reason—that even the London Horticultural Society holds the same doctrine. But the question is now under investigation, and light is thrown on it yearly by cultivators, and even the London Horticultural Society will soon acknowledge their error ; but not till Mr. Hovey has satisfied his own mind, when he will doubtless draw public attention to it. Yet Mr. Hovey, in his August number of the present year, states a person had cultivated an acre of his Seedlings, where they were mixed with staminate plants, and raised two thousand quarts ; and that his new seedling is valuable for impregnating his old one. Here is a tacit admission, that his old seedling is defective in the male organs. The yield was not a large one: Mr. Jackson raised at the rate of five thousand quarts to the acre, near Cincinnati, as he informed the public in a late publication. Mr. Downing, I am positive, had not Hovey's Seedling unmixed with others.*

To keep varieties separate is next to an impossibility, and the more so, as new ones are often produced in the bed from chance seed. I was absent from home two months this summer, and left it in charge with my gardener to watch the beds and keep down runners. On my return, I found the pistillate beds had become mixed, and the staminate Iowa had run on the adjoining pistillate beds,

* The pistillate blossom is usually much smaller than the staminate.

* [What kind of evidence does our friend want to satisfy him? If he will come here, he shall have the affirmations of our ten gardeners, and our own upon the accumulated pile —Ed. Hort.]

on each side, a distance of nine feet. But though Mr. Hovey appears to admit that his old seedling requires staminate plants near, on the same page, he remarks, "it is time and labor thrown away to cultivate sterile plants, as has been recommended by some individuals, when varieties *usually productive* and of *large size*, can be planted out for that purpose." He here of course refers to his own seedlings. To put this question at rest, I make the following proposition: He shall send a plant of each of his seedlings to Mr. Wilder of Boston, and Mr. Jackson of this city; and if, after a fair trial, they report them "unusually productive," I will present the Massachusetts Horticultural Society with $500. I will do this, if they report them as producing as large a crop as the old seedling will do, where one-tenth of the ground is lost by barren plants being inserted. I will go further: if they report his old seedling as producing half a crop of perfect fruit, I will do the same thing: if they report the contrary, he must present the like sum to the Cincinnati Horticultural Society.

Mr. Hovey now states, that among all the species and varieties of strawberries, there are only four worthy of cultivation—the Virginia Scarlet, Alpine, his old seedling, and a new seedling of his, which he calls the Boston; and though raised in 1834, he has never before discovered its fine qualities. This he pronounces "perfect in both organs, a great bearer, and a fine fruit; and also suitable to *impregnate his old seedling*." He is here wide of the mark. The Scarlet is an old native fruit of Virginia, and its greatest merit is its early maturity. The fruit is of good quality, but not large. The Alpine was introduced into Cincinnati fifty years since from the Alpine mountains, by Governor Sargeant. It is deemed of little value; the flavor is not good. Its size is small, and it is only cultivated in a few of our gardens as a curiosity, and not a quart of them is ever found in our markets. What will English cultivators, who have raised so many new seedlings, say to this? What will they think of their wisdom, in having enriched some of their horticulturists, by paying high for new varieties. By the time Mr. Hovey has cultivated his new seedling eleven years more, he will discover that it has not one-tenth the value of his old seedling, and its only value to impregnate it; and for that purpose, we now have as good bearers, as fine flavored and larger fruited seedlings. His old seedling stands unrivalled with us for size, where impregnated; but we have other varieties, that are as good bearers, of nearly equal size and of finer flavor; but I would highly recommend his old seedling to all cultivators, whether for family use, or for sale. His new seedling, I have not seen.

The new doctrine of Mr. Downing, "that all plants in their natural state, are perfect in both organs, and staminate and pistillate ones, chance monsters produced by high cultivation," surprises me, for he deservedly stands high as a horticulturist. In a late number of the American Agriculturist, I discover Wm. R. Prince disputes his theory, and contends for the true character of the plant. Mr. Prince is an experienced horticulturist, and the discussion will call out other experienced gardeners; and I hope in a few years, to see strawberries in as great abundance, and sold as cheap, in the Eastern cities, as in our own. The plant, be it staminate or pistillate, never changes its character in running.

Mr. Prince supposes the pistillate strawberry I obtained from England under the name of Keen's Seedling, to be the Methven Scarlet, as it was cultivated under that name in Philadelphia. The Methven is a different and far inferior fruit. I have the Methven Scarlet, sent me from Philadelphia as the Keen. It is pistillate, and bears a large fruit, but is an indifferent bearer, and of inferior flavor. Mr. Prince speaks of some varieties of the Hautbois strawberries, perfect in both organs, and producing very large fruit. I feel confident he is in an error. What we call the La Grange, is a Hautbois; and I have heard intelligent cultivators contend all the blossoms were perfect in both organs, and always bore a full crop. Such is not the fact. It varies greatly in different seasons. A large portion of the blossoms are wholly barren, or bear small defective fruit; but in some seasons would, to a casual observer, be supposed to be an abundant bearer. But I deem it unworthy of cultivation, where proper attention is paid to a proper mixture of staminate and pistillate plants. Where this is not done, I am not surprised to find it highly lauded. I presume it is the same as the Musk or Prolific Hautbois, but am not certain. The flavor of the Hautbois has but few admirers. On an average, not one blossom in twenty bears with me full sized, perfect fruit.

Mr. Downing describes the Old Hudson, as "a fruit with a neck." Our Hudson is the reverse of a necked fruit, and I have never seen a single berry of this kind with a neck; and I am positive that ours is the same variety that has been cultivated under this name in New-Jersey, and in the vicinity of Philadelphia, more extensively for market, for the last fifty years, than all others united. The Hudson or Hudson Bay, is described in English works as a necked fruit. They obtained it from New-York many years since, and do not consider it a first rate fruit. I incline to the opinion, that the true Hudson was not sent them, or has been lost, and a new variety substituted. It has been of late years imported from England, by New-York gardeners, and by them considered the true Hudson. The genuine Hudson is not now to be found in Boston, and probably not in New-York. It is wholly defective in the male organs, and has been thrown by as unproductive. It is a large and finely flavored fruit, and where properly impregnated, a great bearer.

Mr. Downing, in a letter to me, suggests that our Hudson has probably lost its neck by impregnation with other varieties. I hold, that the character of new seedlings is changed, where the mother plant was impregnated by a different variety, but that the shape or colour of the fruit is not, where impregnated by a variety, differing in shape and colour from the plant impregnated. I wish to see the experiment made, whether the size of the fruit of the pistillate plant is increased or lessened by the staminate plant used for impregnation. An experienced market gardener assures me that it is increased.

I have this moment received a letter from Col. Carr, an old and experienced horticulturist of Philadelphia. He writes me—"I have conversed with Mr. Hobson and others, who pay great attention to the cultivation of the strawberry, and they all unite with me in opinion." "The Hudson is the principal sort cultivated for market, and has been for fifty years. It is what we call female or prolific. It never has a neck. A Mr. Arbegust, who was my near neighbor, and excelled in strawberries, removed to Cincinnati about thirty years since, and took the true Hudson with him, and the same now cultivated here. All our principal market garedners now begin perfectly to understand the difference between staminate and pistillate plants, and find the former such strong runners, as generally to prefer keeping them in separate beds." Mr. Arbegust for many years sold nine-tenths of the strawberries brought to our market, and raised the Hudson only. Whilst I could, from one-fourth of an acre, scarcely raise a bushel, he would raise forty bushels. His fruit was much larger than any other brought to market, and commanded from 25 to 37½ cents per quart. He made a handsome competence from the sale of this fruit. His secret he kept to himself, and had been as much noted for the size of his fruit, and the quantity raised on a given space of ground, in Philadelphia, as he was here. A chance observation of a son of his one day, in my garden, saying, "I must raise but little fruit, as all my plants were males," first led my attention to the subject. I soon discovered that there were what he called male and female plants, and communicated the fact to our market gardeners. The result was, strawberries rapidly increased in our market, till as fine as had been raised by Mr. Arbegust, were sold at from 3 to 10 cents per quart, and he ceased to cultivate them.

The British Queen, is at present the most popular strawberry in England, and much sought for here. Messrs. Cunningham & Son, of Liverpool, write me, that it is a fruit of fine size, and superior flavor, but with them is a bad bearer. That in some soils and situations, it is said to be a good bearer. Here is the old story. I am convinced it will be found to be staminate, and of no value to our market gardiners for a general crop. It may be pistillate, and its bad bearing caused by the absence of staminate plants. If so, it will be very valuable. Certain it is, it will not be found perfect in both organs.

In a late number of the Farmer and Mechanic, it is said, "foreign strawberries are unproductive about Boston, and the only ones now cultivated, are the Wood, Early Scarlet, and Hovey's Seedlings. That *three* cultivators near Boston, sent *four thousand five hundred* quarts to market in a *single season*." What will our market gardeners say to this! The Wood strawberry is thought by them to be worthless, and not a quart was ever sold in our market. Its only merit is, that its blossom is said to be perfect in both male and female organs. The Early Scarlet is raised to some extent; but four-fifths of all the strawberries sold in our market, are the Necked Pine and Hudson; mostly the latter. Mr. Culbertson brings more strawberries to our market than any other person. The greatest quantity he has brought in any *one day*, was *four thousand* quarts; and not one of the kinds named in the Farmer and Mechanic, among them. All were the Hudson. By properly understanding the true character of the plant, Mr. Culbertson has been able to gather nearly as many quarts in a single day, as three Boston cultivators were able to do in a whole season. I saw an editorial article in a recent Eastern horticultural paper, speaking in high terms of the Alpine strawberry, as raised by Col. Stoddard, and its great produce, which yielded him at 12½ cents per quart, upwards of $1,600 to the acre. It is an indifferent fruit, and never yielded one-fourth the quantity.

Can Hovey's seedling, or any other large fruited pistillate strawberry, be impregnated by the Alpine Monthly? It is my impression that they are distinct species, and that it cannot be done.* If it can, a cross might be produced, that with the size and flavor of the one, might be united the ever-bearing character of the other. There is a wild ever-bearing variety in our state, that would cross with the Scarlet and Pine, and is the only kind I have ever seen, worthy of the name of ever-bearing. For the Alpine, after the first crop, rarely produces much fruit through the season. Thirty years since I met with a solitary strawberry plant on Mount Adams, then in bloom. I removed it to my garden, and the plant not only bloomed freely till frost, but all the runners threw out blossoms at the same time that they made roots, and bore abundantly till late in the fall. The fruit was small but of fine flavor. A new hand in the garden, early the next spring, supposed they were weeds, and destroyed them. The old pioneer, Lewis Davis, informed me, the same variety grew in Greene county, on the cliffs, and had been frequently seen by him. I trust it may again be discovered, and Ohio have the credit of producing the only ever-bearing strawberry, [?] as well as raspberry. The latter plant, to produce a great crop, during the summer and fall, requires a moist soil. My ground in the city, is too rich and dry for it. I have never seen the plant bear as well as in Newark, New-Jersey, on a side hill, where the ground is moist, poor and stony. The plant did not attain half the size it does here, but the fruit was large, and abundant, till frost.

N. LONGWORTH.

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Having given Mr. Longworth's views entire, and having stated that we now fully acknowledge their great practical value to all strawberry growers, we trust our readers will have a little patience with us while we state the points on which we differ from him.

In our work on Fruit Trees, while we

* Dr. Brinkle, of Philadelphia, has actually attained this great desideratum. We hope to give an account of the most valuable new ever-bearing sort produced by him in this way in our next number.—ED.

admitted the existence of staminate and pistillate plants, and the necessity of fertilizing the latter in order to obtain good fruit, we also stated that we did not consider them the normal state of any given variety, but only imperfect ones, owing to the degeneration of that sort. We then believed, as we still do, that most of our strawberries, in their normal or original state, bore perfect flowers, and that they run out into pistillate and staminate forms through bad cultivation. We, therefore, recommended our readers to "choose such plants, when in blossom, as have a natural proportion of stamens and pistils — or such as, when in fruit, show large, well developed trusses of fruit. Set a little stake down by these, and take runners only from them for your new plantation. In this way, good plantations will be secured with every plant productive."

So far as regards the general truth of the foregoing, a great deal of subsequent close examination has not induced us to change our views on this point. Notwithstanding Mr. LONGWORTH's incredulity, we still assure him, that two years ago we raised a remarkably large and fine crop of Hovey's Seedling without the proximity or aid of any other sort whatever. The same results have, to our own knowledge, been attained by many persons this season, who have grown large and perfect crops of the latter variety, for the first time, in gardens where there has either been no other strawberry of any kind, or only in distant portions of the same garden. We have examined these plants of Hovey's Seedling, when in flower, and found the blossoms large and perfect in stamens and pistils.

On the other hand, we have examined several beds of Hovey's Seedling, where the blossoms were nearly all pistillate, and were therefore unproductive, unless planted where they were fertilized by other staminate blossoms.

What is the unavoidable inference from these facts? Clearly this, as we have stated before, and from which Mr. LONGWORTH, we believe, dissents—that Hovey's Seedling, andsome other sorts, do vary from a state that is the normal or perfect one of the strawberry, into a pistillate or staminate form.

This is not mere theory with us. Let us refer for proof to our experiment with the isolated bed of Hovey's Seedling in our own garden. Last season was the first that this bed came into bearing. Being fully alive to the interest which this subject has assumed, we examined this bed, daily, when it was in bloom. As we have before stated, the blossoms were all perfect ones—large, well developed, and bearing a due proportion of stamens and pistils. With a careful search we were only able to discover *two* plants that bore pistillate flowers. There were no small plants in the bed. Every plant bore flowers and fruit. The crop excited the admiration of all who saw it, and the berries nearly all measured three and four inches in circumference.

This bed was in strong, trenched soil. It was allowed to make runners last season; but they were all taken off in September, and the same plants allowed to fruit this season.

When these same plants came in bloom in May of this year, we watched the opening of the blossoms with a great deal of interest. Here were identically the same plants, all but two of which bore perfect blossoms and the finest fruit a year ago. Would they vary? was the question now to be solved.

On carefully examining the plants, when the bed was fully in flower, we discovered that more than one-third of the plants now bore only *pistillate* blossoms. Of the re-

maining two-thirds, many bore perfect blossoms, as they had done previously, while a few also bore imperfect staminate blossoms. They produced only a fair crop of good fruit.

Next year we predict that this bed will have changed almost entirely to pistillate plants.

The same result that we have here stated, occurred in another part of our garden with a bed of Ross's Phœnix plants. We called the attention of several persons in our garden, at the time of their blooming, to the perfect state of some blossoms, and the pistillate form of others—to their entire satisfaction. In another part of our garden a bed of Hovey's Seedling, that has borne three years, has become entirely *pistillate.*

This is not a hasty conclusion that we have arrived at. We are forced to believe that most of the Pine strawberries, however perfect in their blossoms at first, if allowed to bear twice or more on the same roots, will degenerate into the pistillate or staminate form—Hovey's Seedling, and probably the other best sorts, into the former.

When they have once reached this state, they require the aid of other plants to fertilize them.* With the aid of such other plants, they bear large and fine fruit—*in some varieties finer and more abundant crops than they did in the natural state; because the whole blossom of the pistillate plant is devoted to the fruit itself, which, therefore, when fertilized by a separate staminate blossom, must of course be larger and finer than when part of its secretions go towards the development of stamens.* In this, we confess frankly, lies the great value of the mode which Mr. LONGWORTH has so warmly and zealously urged upon the public attention.

The result of our investigations we therefore offer to our readers, as follows:

1. There are certain classes of strawberries which always bear perfect blossoms and produce good crops of fruit under all ordinary circumstances. These are the Alpine, and the European Wood strawberries, and (we may add, after a trial of fifteen years,) the variety known as the *Large Early Scarlet.*

2. There are certain classes of strawberries, especially the Pines and the Scarlets, the blossoms of which, even if perfect at first, have a tendency, through overbearing, to run into the pistillate or staminate form, chiefly the former; when this takes place, little or no fruit is produced, unless the blossoms are fertilized by other staminate plants.

3. In the latter case, a crop of large and fine fruit is more certain than under any other circumstances—partly, because the condition of the plants is fixed and not likely to vary into a barren form; and partly, because the whole secretions of the blossom are directed towards perfecting the pistillate portion, which therefore swells into a larger fruit.

4. To ensure a large crop, pistillate varieties should be chosen.

5. The proportion of staminates necessary, so far as at present ascertained, is not more than one plant to ten pistillates. The Virginia Scarlet, or Duke of Kent, are usually preferred for this purpose.

We have only one or two remarks to add in conclusion. We are now very well aware that some varieties of the Pine and Scarlet strawberries are pistillate from their first origin as seedlings. Staminate plants are also produced in abundance by sowing seeds of the strawberry, but these, when

* The staminate or pistillate form once reached, we are inclined to think, from experiments we have made, that it is permament. That is to say, a pistillate plant always remains so. Hovey's Seedling strawberry, at first, was a perfect sort in its flower, but at this moment more than half the plants in this country have become pistillate.

truly staminate, being of no value for their fruit, are usually thrown away, and do not get into cultivation. Only those bearing perfect flowers, or those bearing pistillate ones, ever give large and fine fruit. The former, bearing well at first, have a tendency to run out into sterile forms, which is one reason why some sorts, once in high repute, are now considered worthless. As, however, cultivators become aware of the reason of this barrenness, by choosing a pistillate variety and planting near it a small quantity of staminate plants to fertilize it, they are certain of regular and abundant crops.

We believe that Hovey's Seedling, or any other large strawberry, perfect in its blossoms at first, may be kept in that state by due care. This consists partly in cultivating it well, but mainly in never allowing it to exhaust itself by overbearing. The moment this is the case, as we have abundantly satisfied ourselves, the plant so exhausted takes the sterile form. It is necessary therefore, in order to preserve a Pine strawberry in its normal form, that we allow the plants to bear but once—making a new bed with the runners or offsets the same season that the parent plants bear, and always repeating this.

We have followed this course with some plants of Hovey's Seedling, and will undertake to show any one, who is yet sceptical, plants of this variety, next May, bearing perfect blossoms and fruit.

Of course, however, we no longer recommend general cultivators to follow this course which we think involves much more vigilance and trouble. The plan of fertilizing the pistillate plants is so simple, and so satisfactory in its results, that we gladly record our conviction of its value, now that the season of planting strawberries is at hand, and recommend it for universal practice.

GUANO AS APPLIED TO THE ROSE.

BY L. WYMAN, Jr., OF WEST-CAMBRIDGE, MASS.

In the fall of 1844, I received two small plants of the "Prairie Rose," so called, (a beautiful plant, the fine properties of which have been much increased by a high state of cultivation,) of about one foot in length, and one fourth of an inch in thickness. These plants I placed in my cellar in a state of rest until the next spring. The Guano applications were then first attracting public attention, and I thought the Prairie Rose would afford a good subject for experiment.

I planted one of these roots very carefully, after the following manner: Before planting, I placed in the soil beneath the roots, one half bushel by measure, of well rotted and finely pulverised horse manure, which was entirely free from straw and earth, and covered the same about three inches with good garden mould. This rose plant grew the first season, 1845, remarkably well, and sent out four strong canes or shoots of two feet and one inch in length, and one-half an inch in thickness; but the plant, notwithstanding its healthy state, yielded no blossoms, but continued to put out small side shoots until late in the autumn, or un til the season of frost. This season, 1846, this rose plant has made a good growth, and sent out five new canes or shoots, and still continues to make luxuriant wood. The new shoots are at this writing, July 2d, four feet one inch in length, and half an

inch in thickness at the root near the ground. It has yielded this season *forty-three* blossoms, and has about *twenty* buds more to expand.

The other Rose plant, being of the same size, and of equal quality with the above named plant, was treated precisely in the same manner, with this difference in the manures used; under the roots of this Rose I placed *two and one-half ounces of pulverized Guano*, and one quart, by measure, of fine charcoal dust, which was covered three inches with the same kind of garden soil as the other.

This plant began to grow and send shoots before the other, at least eight days, and continued to send up strong healthy canes to the number of six the first season, 1845, and three of these measured three feet one inch in length, and just five-eighths of an inch in thickness; the others were two feet nine inches in length and very thrifty, bearing large leaves. This plant yielded nine blossoms of a fine size and good form, the first season of its being planted.

This present season, 1846, this plant has far outstripped the other, (some twelve feet distant only,) and for fine proportions and healthy properties, is equal if not superior to any one of the species that I have seen; it has made seven new and firm canes or shoots, and the shoots are five feet and three inches in length and six-eighths of an inch in thickness. This plant has already expanded *four hundred* fair blossoms, and there are remaining on the bush at this writing sixty or seventy fair buds and blossoms.

The ordinary culture of these Roses has in other respects been that usually given to hardy out-door Roses. No uncommon pains has been taken with them, nor have they received any winter protection, except being covered with a little fine straw during the winter months. The above is the result of a carefully noted experiment with Guano, as applied to the Rose plants; and its superiority over the best rotted manures is readily perceived.

I have been making several other experiments with Guano, in its application to *tender* plants, the results of which I will communicate to you hereafter.

L. Wyman, Jr.

West-Cambridge, Mass., July 10, 1846.

Two Experiments made to test Mr. Longworth's Strawberry Theory.

BY G. W. HUNTSMAN, FLUSHING, LONG ISLAND.

Taking Hovey's Seedling as a subject, I procured a bell-glass, and placed it over an entire plant which had not bloomed. The flowers expanded well under the glass, but did not produce one berry. The plant was frequently agitated to put the pollen in motion, if there was any.

I also introduced under a glass some blossom buds before they had blown. These, as they successively expanded, showed no signs of swelling. I impregnated at different times two of the blossoms by hand, applying the pollen from another plant with a camel's hair pencil. These two set their fruit perfectly. The pistils of the other blossoms soon turned to a dark colour. These experiments were made at the north side of a picket fence, where the plants were screened from the full effects of the sun, otherwise the heat under the glasses would have been too great.

These experiments prove, to my mind,

very conclusively that Hovey's Seedling will not bear any fruit unless impregnated by some staminate variety. And the same may be said of other varieties in which the stamens are *obsolete.* I have had some plants of the Hudson Bay for three years, in a position where they cannot very easily be impregnated by other kinds, during which time they have not borne one berry, while other plants of the same variety, exposed, have been productive. A difference in the formation of the flowers on different plants, is not confined to cultivated kinds, but may be seen in those growing wild in the fields, the *pistillate* plants of which I have often examined with a magnifying glass, to see if I could discover any pollen, but have never been able to find it; I am forced, therefore, to believe that *pistillate* plants, both wild and cultivated, are absolutely devoid of pollen, and cannot, therefore, produce any fruit except when impregnated by others.

I am also convinced from observation and theory, that one kind will never change to the other by off-sets. The runner bearing the same relation to the plant producing it as a tree grown from a bud does to the tree from which it was taken. It may, then, be asked, how does it happen that there are *pistillate* and *staminate* plants of the same variety? *I answer, it is not the fact*, unless they have sprung from seed, or the plants have been taken from the fields in a wild state.

That *pistillate* plants are surer and better bearers than *staminate* plants, is, I think, generally true, (provided, of course, that they are impregnated.) And it would seem reasonable to infer that when but one of the sexual organs is complete, the other will have more strength. Plants, therefore, that are perfect in both organs, require a higher state of cultivation. There is, however, a wide differenee in the productiveness of different kinds, that are perfect in both organs, some being much more liable to *blast* than others. G. W. Huntsman.

Flushing, L. I., July 14, 1846.

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Remarks.—These experiments are interesting and to the point. The plants of Hovey's Seedling, made the subject of trial in this case, were evidently distinctly pistillate plants. Our correspondents should bear in mind to state this point distinctly in their details of experiments on this subject. Our correspondent is, no doubt, correct in his opinion, that a truly pistillate or staminate never changes. But he does not touch upon the query, does a normal or perfect blossom change? This is the point.—Ed.]

REVIEWS.

The Journal of the Horticultural Society of London, *Vol.* 1, *Parts I and II*, 8vo. *London: Published for the Society, by Longman & Co.* 1846.

The Horticultural Society of London holds the undisputed first place among all bodies of its class in the world. With the Duke of Devonshire, whose *jardinomanie*, outstrips that of any amateur of the age, for its President,—Dr. Lindley, the leading botanical and horticultural writer of the day, for its Rec. Secretary,—Robert Thompson for its pomologist, and equally able assistants in all other departments,—with its large garden at Chiswick, where most of the various fruits and vegetables of the world are tested,—with its shows patronized by Royalty, so attractive and fashionable that at the last

meeting no less than 13,421 persons visited the exhibition in a single day,—with its collectors sent to remote and little visited countries, in search of new plants,—with an income of over $30,000, which is chiefly expended in medals and prizes for the encouragement of horticulture, and in keeping up the garden,—with all this, we say, it is easy to see that the Horticultural Society of London exerts a strong influence on the gardening spirit, not only of England, but of the world.

These two neatly printed and illustrated numbers, which have just reached us from London, are the commencement of a new work, to be issued periodically by the Society. In the advertisement to the first number, it is announced that "this Journal is published by the Horticultural Society of London, for gratuitous distribution among its Fellows, and in place of the quarto Transactions, which will be discontinued after the appearance of another part. It is intended to contain scientific and practical papers on horticultural subjects of all kinds, the journals of the Society's collectors abroad, and an account of the proceedings at the meetings of the Society, in London and at the Garden."

In short, the present work, we presume, may be considered as a change from the somewhat heavy and expensive shape of the old *Transactions* of the Society, to the more *digestible* form and moderate price demanded by the spirit of the times.

The first two numbers contain several interesting articles. The Potato disease—the wide extension of which in Great Britain, has caused such distress for food in many of the poorer districts of that kingdom, is the subject of the first two articles. "*Observations, botanical and physiological, on the Potato Murrain*, by the Rev. M. J. Berkley." This writer gives a somewhat detailed history of the disease in the potato in various parts of the world. The result of his observations may be summed up in the following paragraph:

"To my own apprehension, then, it appears clear, at least, that the cause of the premature decay and putrefaction of the haulm is to be found in the parasitic fungus, (*Botrytis infestans,*) in consequence of whose attacks, the tubers are unripe and in a bad condition for preservation. Under these circumstances, if decay takes place, there cannot be much matter of surprise; and that, as in all cases of decay, various species of fungi should establish themselves upon the tubers and accelerate it."

"The disease," he adds, "can scarcely be expected, after having had so extensive a range, to subside all at once. The same *atmospheric conditions* which have favored its progress, are not likely to occur again; but still, I fear that it will be felt directly or indirectly for some time, as, in the human frame, the general prevalence of a particular disease, modifies other diseases for many successive seasons."

Article VI., is a very interesting one on "*The Main Points of Vine Cultivation*," by Mr. Robert Errington. The author of this article is a very clever, practical man, the gardener to Sir Philip Egerton, who has exhibited remarkably fine grapes, at the shows of the Society. This article is one that we think will interest all our growers of the grape under glass, and as the journal which contains it, falls into very few hands in this country, we shall extract it entire. We must, however, premise that a great difficulty attending the vine culture in England—the moisture which accumulates in the soil in the damp climate of that country—scarcely exists at all here. Our bright sun soon dissipates all excess of moisture in any soil fit for grape culture. But the practice recommended, of making deep and *very porous* vine borders, is not less beneficial here, since it wonderfully promotes the vigour of the vine and tends to prevent its being affected or checked by our sudden fluctuations of temperature:

In compliance with the desire of the Council of the Horticultural Society, I beg to accompany the late grapes now exhibited, with a few general remarks on the most important points connected with the cultivation of the vine, especially under glass.

With regard to border-making and thorough drainage: I am persuaded that a vast proportion of the grapes which do not colour well, are planted in borders not adapted to meet the great extremes of moisture to which our fitful climate is subject. It is also certain that over-cropping alone is one cause of the colouring, and of course the flavoring, process being incomplete in a great number of cases.

It is quite clear from numberless instances, that porous materials for the mere transmission of moisture, and of course atmospheric influences, may be used to the extent of nearly one-half the volume of the compost with propriety. Mr. Hoare's system, as it is called, although a failure, will, I make no doubt, have done much good in this respect; one of Mr. Hoare's chief errors being undoubtedly the total exclusion of soil from his compost.

Whatever depth of border may be adopted, the substratum should be so complete as to bid defiance to excess of moisture from both springs beneath, and atmospheric moisture above. This being secured, the next point is compost; chopped turf of a loamy character, and inclined to what is termed "sandy loam," is, I am assured, complete, or nearly so, in itself for this purpose, providing the previous points be efficiently secured: as, however, soils, as well as subsoils, differ so much in point of mechanical texture, it is perhaps wise on the whole to use a mixture which, in point of texture, may bid defiance to all weathers.

Two-thirds then, of the loam above described, with the other third composed of equal parts of charred brush-wood, old plaster, and what is termed by agriculturists "half-inch bone," (boiled bone,) will be found all that can be desired or nearly so in border-making.

The loamy turf should be from very old rest land, the older the ley the better; if not of considerable age, I would prefer it from an old lane or road side. It should be merely quartered with the spade, and should by no means be either cut or handled in any way when wet; dryness is as indispensable a point in handling the material for a vine border as for harvesting.

The loamy turf should be thrown in alternate layers with the other portion of the materials, which should be well blended together and close at hand:—some raw stable manure, chiefly droppings, should be strewed in thin and regular layers, all through the mass. Before, however, filling the above compost, which I should advise to be two feet in depth, I would place a layer of half-charred brush-wood, of some strength, over the drainage and substratum; this layer should be nearly a foot in depth.

Such a border I am assured would defy all weathers, and would be found after several years, on the stamp of a foot, to have preserved its elasticity in a very considerable degree; providing that mortal enemy to texture, "the spade," be kept from it. It would only be necessary to cover the roots occasionally with a slight dressing of raw manure, the moment the vines had cast their leaves.

Some cultivators seem to think that a healthy vine will carry all the fruit it may "show;" so it will, but in what way?—why, in the production of small berries, deficient in colour and flavor; for be it understood, the two latter points always accompany each other. In addition to this, another evil is to be feared, viz: an injurious lessening of the vital energies of the vine.

It will generally be found, I believe, after all the complaints about large grapes, that the latter, when *thoroughly* coloured, are decidedly richer than the under-sized ones.

It may be asked therefore, what is the true medium to be observed? It is, I confess, not easy to answer this so as to be perfectly understood; however, as a general rule, I should say that spurred vines confined to the rafter, and established on the principle of border-making before detailed, will assuredly, under good management, produce from fifteen to twenty pounds weight each, every year, for many years. Vines spread over the whole house will yield a third more. It is, however, a better plan, where very superior fruit is the object, to keep below this mark. The leading shoot, if there be one, is a pretty good criterion of the energies of the vine; this, if the vine is honestly cropped, should always be disposed, and also allowed, if possible, to ramble freely.

One point in connection with good grape-growing is an elevated border. One half of the cubical contents of a vine border should, in my estimation, be above the ground-level of the front walk. Now it will be found, I believe, on close examination, that a great portion of the old vineries in the kingdom, by a defect in the original plan of fixing the floor-line too low, preclude, by the level of the front sashes (if any exist), the possibility of the border being much higher. Now as it will, I conceive, be admitted that the floor-line has in most cases an intimate relation with the wall-plate, and of course the front sashes, it becomes a matter of considerable importance to establish it aright; and I always consider it an omen of good vine culture to ascend into a vinery by several steps.

Another and a very common error, according to my opinion, is the mode of managing young vines for the first two years in newly-planted vineries: they are disbudded and trimmed as sprucely as if the object was to carry heavy crops and to obtain plump eyes. Now the primary object of good cultivation should be, I conceive, to obtain a border tolerably well filled with roots.

The best way to accomplish this, is to allow the top to run riot entirely for the first year, and nearly so in the second; for without abundance of leaf there cannot be abundance of root. In the second year, however, the laterals should be stripped entirely away, in a progressive manner, from as much of the main stem as it is intended to retain at the winter's pruning, in order to admit light to the principal leaves, on the agency of which the success of the first year's fruit depends.

It has been the opinion of many, perhaps the majority of cultivators, that "shanking" in grapes is occasioned by atmospheric influences: I am of a very different opinion. I do not however say that such checks, through sudden depressions of tempe-

rature, do not assist in causing it—they fairly may. The chief cause is, however, torpidity in the action of the root, perhaps at the very period when the greatest demand is made upon it to sustain the excessive perspiration which is going on in the leaf, and to furnish fresh matter for elaboration; to both which ends it is frequently quite inadequate, owing to drenching rains.

If the young fibre be examined at such inclement periods, it will be found somewhat discoloured; nay, in some cases quite rotten. And this is not to be wondered at when the habits of the plant are duly considered, and the difference estimated between a vine on the slope of a rocky surface in the south of Europe or Asia, with six inches of soil, and one in the cold northern clime of Britain, in four or five feet of rich soil, every breathing pore closed with a kind of alluvium. This is no overcharged picture—I have seen scores of such cases.

Besides, if shanking were caused by sudden depressions of temperature, why should it not occur more frequently on walls out of doors, where the thermometrical changes are at least as great as in doors? Yet here it seldom occurs, and here again the border is seldom so deep, so rich, or so far below the surface level, as some of our hot-house borders, many of which contain material sufficient for thrice their extent.

The West St. Peter's Grape, of which I now send specimens, is undoubtedly the best late grape in the kingdom in every respect. It is not sufficiently known at the present time, nor its habits sufficiently understood; added to which there are spurious kinds under cultivation. It is a grape which will endure as much heat as a Tokay, and might be planted in the same house. Still with me they are classed with the Hambros for latest purposes, and have to endure a very moderate temperature; however, I never knew one to shank, and I consider it the safest colouring grape in cultivation. The flavor is moreover exceedingly brisk and rich, and the bloom, when syringing is withheld, is most beautiful. On its own root it is apt to make slender wood, especially for the first three or four years; it is also liable to wither at the point of the growing young wood, at intervals during the growing season, during that period. This. I have no doubt, arises in a considerable degree from the same cause as "shanking," according to my ideas of that evil, as before described. However, as the border becomes more full of roots this evil departs altogether—at least it has done so with me—for those under my care, at first liable to shrivel in the wood, have now been perfectly free from it for years.

I would here beg to recommend those who are inclined to grow the St. Peter's, to graft it on the Black Hambro' stock. This was pointed out to me some years since by the Earl of Sefton's gardener at Crozteth (Mr. Balmer), and I have found his opinion to be correct. Mr. Balmer had pushed the cultivation of this grape to a great extent some twelve or fifteen years ago, and used to produce at that period some of the most splendid fruit I ever saw. Two reasons appear to me to recommend this practice: first, the Black Hambro' root is hardier or better adapted to stand the low ground temperature of this climate; and, secondly, the Black Hambro', through this circumstance, has a later action of root than most other vines, and consequently the berries are longer fed with the ascending current. This is, I think, tolerably manifest from the circumstance of the Hambro', in a mixed house of vines, being the last or nearly so to fade.

The Muscats will also, I have no doubt, be found to do better when treated this way, for the same reasons.

Syringing not only may but ought to be dispensed with after the grapes are "set," if a fine bloom is desired; a sufficiently humid atmosphere may at all times be maintained without the syringe. One of the most simple and efficient plans is to enclose the return-pipe, if hot water be used, with a cemented brick trough, with a plug at the end, to empty its contents into a waste-drain when necessary; the top of the cemented trough, of course, left open. As for the arguments in defence of syringing, such as the danger of Red Spider, &c., they will all fall readily before an atmosphere properly charged with moisture, not variably, but permanently.

The best late grape-growing I ever saw, established on sound principles, was at Colney Hatch—Mr. Crawshay's. Those who are acquainted with that system would do well, in my opinion, to apply it to the growth of the St. Peter's Vine, for late purposes. Mr. C. prunes, as is well known, to the "spur-eyes." Now I know of no vine that will better bear the "close-spur" method than the St. Peter's. Mr. C. moreover allows, or rather prefers, two or perhaps three shoots from one pair of "spur-eyes," each with a bunch of half a pound to three quarters, to one shoot with a bunch of double or treble the weight. Small bunches with large berries, well fed and well thinned, are found to keep much better than large bunches; the reason is obvious—the air circulates more freely through the bunch.

I need say little about the "ripening of the wood:" this principle is well known, and I should hope its importance admitted; too much stress cannot be laid on the point, and many are the failures through the neglect or misunderstanding of this very thing.

I am of opinion that what is termed "close stopping," is frequently carried too far; a main leader should in all cases be allowed a good deal of liberty, this being the very thing that produces a fresh volume of root to invigorate the system of the plant for ensuing seasons. I am well aware that it will be said that this militates in some degree against extreme size in the berry. Be it so. I would willingly give up so trifling a point (provided it can be proved) for a more invigorated and permanent system in the vine.

The leading article in the second number is a long and interesting one by Mr. Edward Solly, the experimental chemist to the Society, "*On the Influence of Electricity on*

Vegetation." Mr. Solly recapitulates all, or nearly all, the experiments made with electricity, applied as a stimulent to vegetable growth, beginning as far back as Dr. Maimbray's result with the two electrified myrtles in 1746; and brings the account of our knowledge on this subject down to the present day.

Our readers will remember the startling account of the growth of crops under electric action, which went the rounds of our agricultural papers, about a year ago. Mr. Ross's report, read before the Farmer's Club in New-York, in which he stated that by galvanizing a row of potatoes two hundred feet long, merely by putting down at one end of the row a copper plate, at the other one of zinc, and connecting both by a wire, by which he was able to dig full grown potatoes, while the ordinary rows on each side, contained only half formed tubers; and, still more, that of Dr. Forster, who enclosed part of a barley field in Scotland with a few poles driven into the ground in the form of a square, over which wires were stretched, making a wire parallelogram, eleven feet high, which was connected with a similar square, formed by wires running at the base of the poles, about three inches under the soil — the result of which was stated to be the most strongly marked difference in the luxuriance and product of the parts of the barley field thus acted upon by the intercepted current of electric fluid; these accounts, naturally enough infected all the experimentalists on both sides of the water with an electric fever, ourselves among the number. We failed completely, and we have heard of no single well authenticated account of success. The brilliant hopes of inducing galvanism, or, as one of our friends wittily remarked, "*complacent lightning*," to do the work of that good old fashioned clumsy substance, called manure, have gradually faded away like a summer cloud.

A very interesting series of experiments to test this matter, was carried out by the Horticultural Society. They prove that no practical benefit is yet within our reach from the action of electricity on vegetation.

Article XIV. is entitled "*Some account of the Jefferson Plum*," by Mr. Robert Thompson, the head of the fruit department in the Society's garden, and author of its celebrated *Catalogue of Fruits*. A beautiful coloured plate is given of this, our favorite plum, representing a fruit considerably below the size, however, which it attains in our gardens. We think the Jefferson requires the hot sun of America to bring out its highest flavor; but the following remarks will show that even in England it will hold a high rank:

> This is an American variety of the highest excellence. It was presented to the Society in 1841, by Mr. James Barnet, who obtained it for his nursery at Edinburgh from Mr. Wilson, nurseryman, Albany, New-York. It fruited for the first time in the garden of the Society last season, an unfavorable one for plums and fruits generally. Nevertheless, the variety in question was found to possess so much merit as to render a drawing of it desirable from a specimen, produced on a standard, to which the rest on the tree were very similar.
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> It appears from Mr. Downing's "Fruit and Fruit Trees of America," recently published, that the Jefferson Plum was raised by the late Judge Buel, and that the original tree was growing in his garden near Albany. The judicious author of the above-mentioned work says, "If we were asked which we think the most desirable and beautiful of all dessert plums, we should undoubtedly give the name of this variety." No one can read this statement without recollecting the well known excellence of the Green Gage, and questioning whether, in point of flavor, it can possibly be equalled by the variety under consideration. To say that the Green Gage, under the most favorable circumstances for acquiring perfection, would be surpassed, might prove an exaggeration. That remains to be determined. In the mean time it can be stated that in the past unfavorable season in which only there has been an opportunity for comparison, the Jefferson was found decidedly superior to the Green Gage.

There is a good deal of interesting information on various gardening topics, notices

of new plants in the garden of the Society, its proceedings, &c. &c.; on the whole, we look upon this Journal as one of the most interesting horticultural works of the day, and shall keep our readers informed of the novelties that appear in its pages. It is not stated how often it is to appear. The price, to those who are not Fellows of the Society, is about $1.50 per number here, including the importation duty; and the work may be ordered through Messrs Wiley and Putnam, New-York.

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CENTURIE DES PLUS BELLES ROSES, *choisies dans toutes les tribus du genre Rosier; peintes apres nature par* MME. ANNICA BRICOGNE; *accompagne d'un texte descriptif de toutes les variétés connues, &c. Par* M. VICTOR PAQUET. (4to. Paris, H. Cousin, Rue Jacob.)

A BEAUTIFUL French work now being published in Paris in numbers. Each number contains two portraits of the rarest and choicest varieties of this universal favorite, given of the size of nature, and exquisitely coloured. The Bourbon, Hybrid Perpetuals, (or *Hybrides Remontantes*) and Tea Roses, occupy of course the most conspicuous place.

Although the Rose is the flower *par excellence* from all antiquity, yet it may be said with perfect truth, it is only within the last few years that its incomparable beauty and value have become known to the world, since it is only very lately that these new hybrid productions, which are purely the triumphant results of scientific gardening, the offspring of *hybridization*, have been produced. The Rose was once but a fugitive beauty, opening its petals only to the first breath of summer, then fading quickly and remaining a neglected and forgotten bush for the rest of the year. Now, thanks especially to the charming Bourbons and Hybrid Perpetuals, we can gather Roses of large size, superb forms and delicious odors, from the open garden from April till November.

The portraits of the finest new varieties in the work before us, are very striking and satisfactory ones. Princess Adelaide and Prince Esterhazy, two magnificent Tea Roses, are particularly beautiful.

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TRANSACTIONS OF THE CINCINNATI HORTICULTURAL SOCIETY, *for* 1843, '44 *and* '45; *with the Charter, Constitution, By-laws, List of Members, &c.* (8vo. Pamphlet, 68 p. Cincinnati. 1846.)

THIS is a spirited and active young Society, and, as we hear from all sides, is doing a great deal for the advancement of horticulture in the Western States. Indeed Cincinnati, if we mistake not, is destined to become a rival to Boston, at no very distant day, in the zeal and energy of her cultivators.

It ought to be the ambition of this Society to found, at the earliest possible moment, an experimental garden or orchard. There is even more need of it there, than here. The confusion in the nomenclature of fruits, especially throughout all the west, is, as we have found to our own great perplexity, truly endless. Many amateurs, finding a a good variety of fruit in their garden which they do not know, bring it forward as a seedling, when it is a sort which is old and well known at the east. And many persons, who have received from nurserymen here, kinds of fruit under celebrated names, which are not correct, do not hesitate to denounce them as worthless there, when they have never had the genuine variety in their possession at all. A garden with specimen trees of all the leading sorts of fruit, backed by the authority of a Society like this, would soon correct an evil which, we can plainly foresee, will otherwise last half a century more, to the annoyance of all those who desire to arrive at some standard in pomology.

On p. 17 of these Transactions, we find an article by Mr. S. S. L'Hommedieu on the "*Extirpation of worms from the roots of Peach trees.*" He states, that his trees having been much infested with the Peach-worm, he applied the mixture of salt and salt-petre to the roots for three years without success. He adds, "in the middle of June last, on the appearance of Dr. Kirtland's letter in a gazette, recommending the application of ashes or slacked lime, I applied half a peck of slacked lime to each tree, on the surface of the ground, in contact with the trunk. Last week, (Oct. 28th,) I again had the trees examined, *but found no worms.* The roots of the trees appear healthy, there being no gum oozing from them as at first. The whole orchard looks remarkably well, and will compare favorably with many that are younger in this neighborhood."

This corresponds with our own experience. There is no difficulty in preventing the Peach-worm from destroying peach trees, if a small heap of slacked lime is put about the collar of the tree every spring.

On p. 14, it is stated that one individual, Mr. Culbertson, sent to the market of Cincinnati, in a single day, *four thousand quarts* of strawberries. He employs sixty hands in gathering. "The plan of shipping them to New-Orleans, packed in ice, has just commenced, and may eventually become an important branch of business."

Vineyards are springing up on every side of Cincinnati. There is a very interesting report of a committee appointed by the Society, through its chairman, Mr. Flagg, of the vineyards in Hamilton county. We shall, hereafter, return to this report. From the survey of the several vineyards, many of them new, and as yet only half in a bearing state, we find that even in 1845, which was considered an unfavourable season, 23,219 gallons of wine were made from 144 acres of vineyards in Hamilton county alone.

On this subject we find a short article by Mr. Wm. Resor, which is, practically, so much to the point, that it will interest all cultivators of the grape; and we shall give it in a future number. Mr. Resor, very obligingly, sent us a sample of his Catawba wine, which is an excellent Hock.

In "*A list of Cherries that have been tested in Ohio,*" by our friend Professor Kirtland, of Cleveland, we observe the following memorandum:

"Plumstone Morello.—I can discover no properties in this fruit that render it worthy of cultivation. It is not equal to several other varieties of the Morello."

Prof. Kirtland is evidently in error here, and has not received the tru Plumstone Morello. Wherever known here, it is very highly esteemed, being one of the largest, most productive, and best flavored, of the acid cherries. We have compared it this season, with four other of the most celebrated European Morellos that have borne fruit in our gardens; it is fully equal to the best in flavor, and is rather the largest in size.

There is quite a variety of other interesting matter in this pamphlet, which we have not space to notice. The exhibitions appear to have been very creditable to the Society, and we are gratified with the strong evidence which these pages give us of its healthy and prosperous condition.

Protecting Trees from Mice.—A correspondent of the Gardener's Chronicle mixes soot and milk till of the consistence of thick paint, and then applies it to the trees with a brush. This, applied once a year, he finds effectual protection against hares and rabbits. Would it not be equally so against mice?

FOREIGN NOTICES.

LAST EXHIBITION OF THE LONDON HORTICULTURAL SOCIETY.—The visit of Ibrahim Pacha last Saturday to the Great Exhibition in the Garden of the Horticultural Society will, we trust, prove as beneficial to Egypt as it was interesting to himself. For the gratification of those who wish to know the effect produced upon the mind of the African Prince by so extraordinary a display of what he could never have previously seen, or imagined the existence of, we may state that his Highness was delighted by the spectacle. The Pelargoniums, large specimen plants, Cacti, and Heaths, appeared to be viewed with great admiration, for, upon being asked which of them he would be desirous of taking back to Egypt, he cast a rapid glance over the mass of flowers, paused for a moment, and, throwing up his arms, exclaimed, "All, all." The Pinks and Ranunculuses, with which he was familiar as natives of the East, were viewed with pleasure, as were the beds of Roses. In examining the fruit, Peaches and Nectarines, a few of the Pines, and the noble Strawberries most excited his admiration, but he had seen finer Cherries than any before him. How much the Pine-Apples weighed, how many persons would come, how many tickets were sold, how much money was given away in prizes, and similar statistical inquiries, seemed most to engage his serious attention. He was evidently much gratified at his reception by Lord Auckland on the part of the Society, and by the attention he received from the noble Earl, and Lord Normanby, who accompanied him during the whole of his stay; and he quitted the gay scene most unwillingly at half-past 2, on his way to Birmingham, expressing his great regret that the necessity of his arrangements left him no alternative. Had the Pacha known that between 13,000 and 14,000 visitors would have thronged to the Garden in the afternoon, of whom at least two-thirds would be charmingly dressed women, we suspect that his regret would have proved the master of his necessity.

With respect to the Exhibition itself, we may state that although the gay Azaleas of May were missed by everybody, yet that the general effect was as good as ever. The Pelargoniums were in their glory. Orchids were magnificent: who, for instance, ever beheld such a bank of these plants as was this time brought from Mr. Rucker's garden, among which was an Aerides odoratum, to have produced which alone would have made the reputation of any gardener. Then the fruit, which was so meagre in May, did honor to the skill of English gardeners, and so the Pacha seemed to think, although, from the remarks of a correspondent in another column, it appears that the judges were of a different opinion. The Heaths were better than before, and a single plant of Erica ventricosa purpurea, from the garden of Sir George Staunton, was as fine a thing in its way as the Cyrtopod of the previous exhibition. Of such things as these we can only say that high gardening can go no further.

More novelties were present than before. The Royal Botanic Garden at Kew sent the charming Torenia asiatica, whose indigo stained flowers everybody stopped to admire, although by some oversight it had not been properly marked. Mr. Veitch furnished a beautiful little long-spurred Balsam from Java, with Æschynanthus pulcher, a good and new form of that fine genus.

Considering that the thermometer had stood near 82° for the previous fortnight, that it ranged as high as 86° in the shade and 97° in the sun, during the Exhibition, and that the plants can hardly be said to have felt it, so fresh and unflagging was their appearance, we should wish to ask, how we are to measure the skill of the exhibitors who had successfully contended with such adverse circumstances?

There were no accidents among the ocean of carriages, but it took a long time to find the latter, so that either from that circumstance, or an unwillingness to leave the coolness of the garden for the heat of London, many visitors lingered till the evening had nearly closed in. The exact number of visitors was 13,421, exclusive of supernumeraries.—*Gardener's Chron., June* 20.

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SOLANUM LYCIOIDES. Lycium-like Solanum. *Greenhouse Shrub.* (Nightshades.) Peru.—This charming shrub was found by Mr. Hartweg, in the valley of San Antonio, in Peru, and flowered in the Garden of the Horticultural Society in November, 1845. It has a neat habit; the flowers are of the richest sapphire purple, enlivened by a bright yellow eye, and in the wild state appear in clusters, so as to load the little spiny branches. The name is a happy one, for in its natural state it is very much like a dwarf Lycium barbarum. In cultivation, however, it loses some of its stiff spiny habit, and has hitherto not yielded flowers in clusters; but they are larger than in the wild state. It is by no means new to Europe, for it was represented in Jacquin's Figures of Rare Plants, above sixty years since; but it has disappeared from the gardens of this country. So very poor, pale blue a variety was indeed at that time possessed, that it hardly deserved to be preserved even in a botanic garden. It is found to be a greenhouse plant that succeeds in almost any kind of soil, but to prefer a sandy loam, mixed with a little rough peat. To flower it well, it seems necessary to place it out of doors during summer, in some exposed situation where it can remain till the end of September. By that time the flower buds will be formed, and they expand in a short time after the plant is taken in doors. It is easily propagated from cuttings, and must be regarded as a good addition to our autumn flowering greenhouse shrubs.—*Botanical Register.*

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ACHIMENES PATENS. Spreading Achimenes. *Green-house Herbaceous Plant.* (Gesnerads.)

Mexico.—One of the first objects to which Mr. Hartweg directed his attention on his return to Mexico, in 1845, was the recovery of this beautiful plant, which he had found in the course of his former researches, but which had not been reared in the garden of the Society. Although the season was so far advanced that herbage had all become withered, he succeeded in discovering some roots, which were immediately sent home by the post, and proved to be this plant. Nor does it disappoint the expectations that had been formed of it; for with the habit and foliage of A. longiflora, it bears flowers of so intense a violet that no artificial colours can imitate them. This most remarkable tint fades away on the outside of the corolla into a clear bright purple, and is renewed on the tube of the corolla in an intermediate tint. The border of the corolla is slightly notched, and its tube is extended into a singular blunt horn, which projects beyond the calyx, and is more or less lobed at the sides. The corolla measures about an inch and a half across the flat border, and the tube is rather larger. Achimenes patens, like most of the other kinds, may be treated so as to flower nearly at all seasons of the year, and only requires to be kept in a dormant state and quite dry when at rest. It should be started gradually, and grows best in a soil composed of a small portion of well decomposed cow-dung and half decayed leaf mould, in a very rough state.

It is easily increased by the scaly roots, and requires a close atmosphere, but not a very damp or hot one. It is a very handsome kind, being one of the finest both for colour and foliage.—*Journal of London Horticultural Society.*

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Gardenia florida, L.; var. Fortuniana. Mr. Fortune's Cape Jasmine, *Green-house Shrub.* (Cinchonads.) North of China.—The common single and double varieties of this plant are known to every one. That which is now noticed differs merely in the extraordinary size of the flowers, which are nearly 4 inches in diameter, and in having fine broad leaves, sometimes as much as 6 inches long. The flowers are pure white, changing to light buff as they go off, and not unlike a very large double Camellia. Their calyx has the long broad lobes of the original species instead of the narrow lobes, at least twice as short as the tube of the corolla, of G. radicans, by which that species is technically known. It is one of the very finest shrubs in cultivation, and ranks on a level with the double white Camellia, which it equals in the beauty of the flowers and leaves, and infinitely excels in its delicious odour.—*Jour. of London Horticultural Society.*

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Rose-coloured Halesia.—"M. Leroy has, in his nurseries at Angers, a Silver Bell Tree, *Halesia tetraptera*, with rose-coloured flowers: in the form of the flower, the leaf, and the general habit of the tree, it does not differ from the common Halesia; the petals are, however, rose-coloured, marked with longitudinal stripes of darker red. M. Leroy has cultivated this tree for fourteen or fifteen years, among many others of the common Halesia, whose flowers are pure white; but it is only lately that the difference in the colour of the flowers has been noticed. It is now being largely propagated and will soon be offered for sale abundantly."—*M. Pepin in Revue Horticole.*

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To raise Cedars of Lebanon.—"M. Leroy employs a very simple mode of raising this somewhat difficult tree from the seeds. Instead of endeavoring to get the seeds out of the cones, (which it is always a difficult matter to do without injuring a great many,) he *plants the cones entire* in the earth. In this condition they find just the necessary state of moisture; they germinate between the scales of the cone, of which latter many fall to pieces of themselves. It is then easy to take them up and transplant them in the open air, or in pots." [A shady north border is preferable for young seedlings in this country.—Ed.] "In this mode, which is the nearest approach to the natural one, every fertile seed germinates."—*Ibid.*

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Appearance of the Paulownia as a large tree.—We are now able to judge of the effect of the Paulownia as an ornamental tree. The oldest tree in France, that planted in the open air in 1836, by M. Newmann, in the garden of the Museum of Natural History, Paris, is almost in an *adult* state, and has assumed its proper character. We can then predict that this tree will assume in a great degree the shape and the dimensions of an apple tree, and that its proper place therefore will not be in the avenue, but as a single specimen, or forming small groups on the lawn. Its straight and pyramidal clusters of large blue flowers (resembling in size and shape those of *Gloxinia caulescens*) lose something of their effect when they begin to bloom, because they expand before the leaves. But towards the middle and close of their blooming season, the foliage is rapidly developed and forms a rich back ground, making a magnificent appearance by their number, their colour and their gay effect. It is then a very charming tree.

The Paulownia forms its flower-buds for a next season in summer, so as to show very conspicuously in September, the clusters of large buds so well clothed as to stand the cold of winter perfectly. This gives it rather a singular effect. But it would be more charming if its large leaves were fully developed before the flowers opened. *Poiteau, Annales de la Société d' Hort. Paris.*

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Remarkable Cereus speciosissimus.—M. Pepin gives an account of an extraordinary specimen of this brilliant Cactus, in the possession of M. Gervais, at Audillibly, valley of Montmorency. "It is an old plant and has been growing in the ground in a green-house for seven years past. It covers the whole surface of the wall of this greenhouse, which is 15 feet high and 40 feet long. It produces every year from 1,500 to 2,000 flowers. From 400 to 800 are often seen expanded at the same time when the effect of the rich colours is that of a glowing and superb tapestry. The plant now covers the whole space on the wall, and they are obliged every summer to cut off the extremities of the leading shoots many times."—*Revue Horticole.*

DOMESTIC NOTICES.

HEDGES OF THE THREE-THORNED ACACIA.—The Thorny Acacia (*Gleditschia triacanthus*) has been recommended to me for a hedge. What is your opinion of it? I can procure seeds of it in abundance, and I understand they will produce a hedge much more quickly than the Hawthorn. Yours. *S. M. Cincinnati, O.*, 1846.

We cannot recommend the Three-thorned Acacia, where a really good and permanent hedge is desired. It grows very rapidly, and its foliage is very ornamental; but its habit is so coarse, and its growth so rampant, that it is almost impossible to keep it within due bounds, and form it into a really compact hedge. If only a loose and picturesque barrier is desired by our correspondent, then it will do perfectly well. But if he desires a compact and durable hedge, he had better employ the Buckthorn, or some of our native thorns. Our friend, the late Judge Buel, was quite partial to this plant, and strongly recommended it for hedges. By his persuasion mainly, we planted about 600 feet, eight or ten years ago, in excellent soil. The hedge is a flourishing one, but neither trimming, shearing nor plashing, succeeded in making a close and satisfactory hedge.—ED.

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THE LENOIR AND THE HERBEMONT GRAPES.—In your "Fruits and Fruit Trees," you do not decribe the Herbemont Grape. Is this because you suppose it synonymous with the Lenoir? I obtained from Mr. Herbemont both these varieties, and always, till this season, felt certain they were not the same. I still incline to this opinion. But one of my vine-dressers, who has grown both for seven years, believes them the same. I have always supposed the Lenoir made double the wood of the Herbemont, and produced the most compact bunch of grapes. Can the Lenoir be a native? It is as hardy as the Winter Grape (Frost Grape), and as a table grape hardly to be surpassed by any foreign variety. The fruit of the two (if they are two) is of equal quality. I have thought the Lenoir wine inferior to the Herbemont. *N. Longworth, Cincinnati, O.*

REMARKS.—We supposed these two grapes identical, when we wrote our work on Fruits. Both these sorts are still very rare, indeed are scarcely known in our collections at the east; and we have yet had no very good opportunity of comparing them, but hope to do so the coming September. Since our last number, we have tasted a bottle of the Herbemont wine from Mr. Longworth. It possesses a very delicious *bouquet*, and high and peculiar flavor, and was pronounced, by a friend who is a connoisseur, to be a wine of very high character.—ED.

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COAL TAR.—We have recommended the coal of the gas works as an application to the stems of fruit trees, near the ground, in order to prevent mice from girdling them in winter. We observe, in the *Ohio Cultivator*, that a correspondent says, he applied it to some trees in a young peach orchard, and it destroyed the trees.

Now we have seen this coal tar applied to at least 500 trees for three successive winters, and with the most satisfactory results. In England it is largely used in parks and preserves, upon all kinds of small shrubs, to protect them against the domestic hare, and we have never heard a complaint.

It is therefore very evident, either that the correspondent in question did not use tar from the gas works, but some stronger kind of tar, or that he used it in an inordinate quantity. The coal tar of some of the iron manufactories is very strong; either it or common tar, if very liberally used, would cause the death of tender young trees. But the gas works tar is thin, and but little of it will adhere to the bark at a single application. Where this cannot be used, we have known common tar to be applied with the same good results, after being mixed with one third *lard*.

There are always some experimenters who fail from thinking "if a little of a thing is good, more must be better." Hundreds of cultivators in this country burnt up their crops with *guano*, last season, by applying too much, and therefore forever after have foresworn this manure.

So too with the mixture of salt and saltpetre, recommended not long ago in the agricultural journals as a fertilizer for the peach tree. A writer, in the Transactions of the Cincinnati Horticultural Society, who gives his experience with it, in an orchard of four hundred sickly trees, says, after applying it, in the course of a few months the trees gave evidence of renewed life. He adds in a note, "a number of individuals in the vicinity of this city, having fine young orchards, destroyed many of their trees, *by applying the remedy too freely*."

Neither coal tar, nor guano, nor saltpetre, nor, in short, any thing else that is a powerful agent, can be used with the prodigality of air and water, Unless people can use them with some judgment, they had better not meddle with them. A burnt child dreads the fire, while a Humboldt finds in this element the moving cause of life, beauty and order, in the whole material universe.

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KNIGHT'S SWEET CURRANT.—This variety has borne fruit with us, and we observed a dozen strong plants, well laden with fruit in the well stocked nursery of Mr. James Wilson, Albany.

It is much less acid than the common Red or the Red Dutch Currant. Mr. Wilson considers it a great acquisition. Mr. W., in company with us, compared it in flavor with different varieties then in bearing, and we decided, that as regarded its flavor, it very closely resembles the *White Dutch* currant, being just about as acid as that variety, which is the most agreeable in point of flavor of all currants. The colour is a paler red than the Red Dutch

There are many who have supposed from its name, that this is positively a *sweet* currant. On trial, it proves to be only comparatively so, being in fact only less acid than the common Red Currant.

Myatt's Victoria has fruited this season, and is a large and excellent sort.

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THE MADELEINE PEAR.—Dear Sir: The Madeleine Pear is now in perfection with me. It has fruited for two years past; but I am obliged to say that generally it does not ripen well. It is apt to rot at the core. Is this a defect common to the variety? *J. W. Baltimore, July 14th.*

The Madeleine, and we may add, almost all other pears, *must be ripened in the house.* If left to ripen on the tree, they have little or no flavor, and soon decay. If picked as soon as they are fully grown, begin to colour well, and part readily from the tree, they are melting, juicy, high flavored, and delicious. We cannot too often urge this upon the attention of all novices in the pear culture. When once they have made the trial, they will never again think of allowing pears to ripen on the tree.—ED. .....

CENTURY PLANTS IN BLOOM.—We have paid a visit to a specimen of the *Agave americana*, now being exhibited at the conservatory of Messrs. Dunlap and Thompson, Broadway, New-York. It is not yet in full bloom, and will present an interesting appearance in about a fortnight.

We learn that this plant, and a companion to it now shown at Boston, have just arrived from Jamaica, whence they were brought by an enterprising gentleman, formerly of Northampton, Mass. He is at least determined that the present age shall not be ignorant of the appearance of the renowned Century Plant; since, besides these two in our principal cities, he has himself sailed with two more to Europe.

The Agave disappoints most of its visitors, who expect great beauty in the individual blossoms, which have very little. The fact is, this plant is always shown under a disadvantage of a too cramped apartment—some green-house or exhibition room.

It ought, when it begins to flower, to be planted out in a fine lawn. There, its gigantic height, and its truly noble proportions would strike every beholder, and it would be universally admired. A plant that throws up a flower stem like a tree, thirty feet high, with branches disposed with wonderful symmetry, and thousands of blossoms, can never be seen to advantage, except upon a large open lawn.

The idea that the Agave blooms but once in a century is long ago exploded. In its native country it blossoms at ten to twenty years old. In our green-houses, want of space and want of heat often retard its flowering three times this period.

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CHERRIES IN WESTERN N. Y.—At a recent exhibition of the Horticultural Society, at Rochester, about twenty-five different varieties of cherries were shown. A fruit grower from the vicinity of New-Haven, who was there at the time, says that he has never seen such finely grown fruit, as were most of the specimens.

The leading and almost only kinds in the markets at Rochester, are, the Black Tartarian, Black Heart, Bigarreau, and Black Bigarreau; with the common Morello, *ad libitum.*

Downer's Late, Sparhawk's Honey, and American Amber, are now (July 4,) in perfection, but they are not cultivated in sufficient quantities to appear in the baskets of the fruit dealers.

The late heavy rains have done much damage to some of the varieties, among which are the Black and Napoleon Bigarreaux. In many instances, all the fruit on thrifty and heavily laden trees, has entirely decayed, in from 12 to 24 hours.

On the sandy plains just north of the city, the cherry-trees have been, this summer, infested with Rose bugs, in great numbers, to the inconvenience and loss of the owners of the trees. These insects prefer the *parenchyma* of the leaves upon which they feed, whereby the fruit is much injured, or destroyed for want of proper nourishment. In some cases, however, they bite or puncture all the cherries. I have violently shaken a small tree, when so many of these bugs would drop, as literally to cover the ground. *J. W. Bissell, Rochester, N. Y., July 7, 1846.*

NOTE ON THE ROSE BUG.—In loose sandy soils the *Rose bug* is often a serious annoyance to the cultivator. It finds an easy access, and a warm and genial home in such soils, while it propagates but slowly in heavy soils. We understand from a friend, who has suffered greatly in his garden by Rose bugs, that for two years past, he has ploughed or turned up the surface of the soil at the approach of winter, leaving it as loose and as much exposed as possible to the action of the frost, since which he has been but little troubled by them. The frost destroys them in a larva state.—ED.

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MANURES: NATURE'S RECIPROCITY SYSTEM.—Mr. Downing: The indefatigable Liebig, after his searching analyses into the nature and wants of vegetables, has arrived, it seems, at the conclusion, that, although other substances will be occasionally beneficial, yet we must resort to the *Barn-yard* for the only substance which contains *all* the elements that plants require!

To my mind, there is something satisfactory in being brought back, after a tour of impatient search for fertilizers, to the simple usage of the earliest agriculturists, and there is a moral lesson taught by this result, which makes us admire, as well as rely on the wise and beneficent laws of the Creator. He has so ordered it that the animals, and the land which sustains them, shall not only be mutually necessary and beneficial to each other, but *all-sufficient*; that when he decreed that man should live "by the sweat of his brow," and to struggle with "thorns and thistles," he provided not only the most powerful aid at the threshold of every culturist, but a substance which would have been a nuisance if it had been useless.

The pursuit of the natural sciences often conducts us to positions, whence we can "look through nature, up to nature's God," and it adds a charm to the fascinations of country life, that it affords us

the best opportunities for the cultivation of those sciences. *Evelyn.*

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THE SWEET MONTMORENCY CHERRY.—Dear Sir: I send you, by Adams & Co's. Express, this day, a box of my seedling cherry, "Sweet Montmorency." In this vicinity, this has been a very unfavorable season for most kinds of fruit. What was left on the trees after the late frosts, which injured the young fruit, the birds and the rains have for the most part, destroyed. This is not the case with this variety, owing to the lateness of its ripening.

We consider it worthy of more general cultivation, for these reasons: 1st, it comes after most cherries are gone. 2d, it is a sure bearer; having *always* given a good crop, from the first year of bearing, (which was about 1836.) It is also but little subject to the rot from wet, and does not crack.

3d. It is of excellent quality, and soon becomes a great favorite with those who have eaten it, and although the size is small, yet those who have once eaten the fruit, inquire for it again, and all that could be spared has been sold at prices higher than the usual rate.

My object now in sending it you, is, that in the forth-coming edition of your work on Fruits, you may be able to state some facts regarding it, of importance, regarding the time of ripening. Ten days since it was coloured, and a stranger to its qualities might think it ripe, and gather and pronounce it worthless, from the fact that it is in that state quite bitter. It should remain on the tree till well coloured. In those sent you, will be found some not fully ripe, but the bitter has passed off. The fully ripe and coloured, will be found sweet, rich, melting, and vinous. I say melting, as I am not partial to the firm cherries. The *Bigarreaus* are too hard for me. Respectfully yours, *John Fisk Allen. Salem, Mass., July* 15, 1846

Fig. 29. *The Montmorency Cherry.*

REMARKS.—This box of *Sweet Montmorency* cherries, from the original tree in Mr. Allen's garden, reached us safely. We gave a figure and description of this cherry, in *The Fruits and Fruit Trees of America.* It is a very distinct and very valuable cherry—indeed the best very late cherry for the dessert, that we have yet tasted. The tree is a thrifty, hardy grower, with the habit of a heart cherry. It is from ten days to a fortnight later than that most excellent sort, Downer's Late, and is therefore a most desirable variety even in small collections.—ED.

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EXPERIMENTS MADE TO TEST THE STRAWBERRY QUESTION.—I send you the results of some experiments I made two years ago, to satisfy myself regarding this subject. I now consider it settled, that some plants, in order to bear, must have male or staminate plants near them.

1st. I first tried six plants of Hovey's Seedling in the green-house, in January, before the bees could operate upon them. They blossomed very well, but did not set a fruit.

2d. Next the same number of plants, and on each side, plants of the Alpine variety were placed; the flowering was good, but not a fruit on Hovey's Seedling set.

3d. Then the Hovey's Seedling, and by the side of them, the Scarlet or Early Virginian was placed; every fruit blossom of the Hovey's Seedling swelled and ripened well.

The first experiment was tried alone the year before, but this was not considered satisfactory. The year succeeding, the three experiments were repeated in a vinery, 100 feet long, and at some distance from each other, and to my mind are perfectly satisfactory. *John Fisk Allen, Salem.*

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NEW-JERSEY HORTICULTURAL SOCIETY.—This Society has issued a spirited circular, in connection with its schedule of premiums for this year, which will no doubt add greatly to its list of members. From this circular we learn that "the proportion of persons in New-Jersey engaged in Horticulture, compared with Massachusetts, is as six to one, and with New-York nearly three to one. Indeed, by her situation, New-Jersey seems intended for the garden and orchard of the great cities and towns to which her products are so easily sent. Her soil and climate are eminently adapted for the growth of horticultural produce, which already forms one of her principal sources of income, and is yet capable of great improvement and increase."

The great autumnal exhibition takes place at Princeton in September (day not yet fixed.) The list of prizes is a very liberal one, and we are confident, from the previous shows of the Society at Burlington, that it will be one of great interest. The following are the officers of the Society for 1846: Richard S. Field, Princeton, *President*; Rt. Rev. G. W. Doane, of Burlington, John S. Chambers, of Trenton, Hon. William Wright, of Newark, William White, of Lawrenceville, Roswell L. Colt, of Paterson, John S. Van Dyke, of Mercer, *Vice-Presidents;* Ira B. Underhill, of Burlington, *Treasurer;* Wm. W. King, of Burlington, *Recording Secretary;* Horace W. S. Cleveland, of Burlington, *Corresponding Secretary.*

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THE STRAWBERRY QUESTION.—Regarding the Strawberry, I think the true policy is to grow, for a crop, only the pistillates, with just enough of the other to fertilize them; then we can have a certain and abundant yield. I have come to the conclusion that our best staminates produce but an imperfect crop; that only a portion of their blossoms set their fruit, and that most of them are worthless, except for fertilizers. With the aid of staminates as fertilizers, every fruit of a pistillate variety will be perfect, and every blossom a fruit. Following this mode, we may have this delicious fruit as easily and as plentifully as beans. Yours, *M. P. Wilder, Boston, July.*

EXCELLENT MODE OF SETTING GRAFTS.—Last spring, in a nursery in our vicinity, 110,000 apple grafts were made in the ordinary way, and *wound with tow*. Owing to a severe drouth, however, at the time of planting out, to subsequent heavy rains, or to some other cause, only 30,000 have succeeded. Simultaneously, my very first practical attempt at the interesting work was made, and with such comparatively brilliant results, that I am induced to whisper my triumph in your pomological ear.

Of apple grafts, I made 110 precisely; 96 are doing well. Of 400 pears, 360 are likewise thriving; but in lieu of *tow* as binders, I applied strips—required breadth three-quarters of an inch generally—torn from sixpenny factory cotton cloth, which was brushed over on one side with grafting wax. Three yards of cloth, with four ounces of wax per yard, will suffice for 1000 two year old trees. If this is a slower process, it is the surest and best, I am convinced, take one season with another. And with the above result in view, do you not deem it the most economical? I attribute my failures more to poor roots than to poor workmanship, or to the inefficiency of these ligatures. *Sciolist. Syracuse.*

MASSACHUSETTS HORTICULTURAL SOCIETY.

MASSACHUSETTS HORTICULTURAL SOCIETY HALL,
Saturday, June 27th, 1846.

Adjourned Meeting—The President in the chair.

Mr. BRECK, editor of the N. E. Farmer, announced to the Society that he was about to discontinue the paper, and to become interested in a new periodical, to be issued on the 1st of July, called "The Horticulturist," and as the N. E. Farmer had published gratuitously the reports of the Society from its commencement, he asked the favor that the official reports and doings of the Society might be furnished for publication in "The Horticulturist."

Mr. SAMUEL WALKER replied to the above in the following appropriate remarks:

Mr. President—In rising to respond to the request just made by my friend Breck, I feel somewhat embarrassed, lest the remarks I shall make may be misunderstood. I like old landmarks, old friends, the good old way, and the long published periodicals, which I have for many years received; they become a part of our existence, and when they are discontinued, it reminds of the parting forever with some esteemed and beloved friend. It was thus when the last number of Loudon's Gardener's Magazine was received—it is so with a notice of the discontinuance of the N. E. Farmer; but, sir, waving all unnecessary indulgence of personal feeling, I can but say I am glad to perceive in the death of the Farmer, the birth of a Horticulturist. Sir, we have need of such a paper, indeed for many such publications, and if they are conducted on a *liberal* and *generous* principle, they will, they must, succeed The advertising sheet of such a paper, ought and indeed must be open to all cultivators; it has been and ever will be fatal to any publication which shall adopt a different course.

Mr. W. then offered the following votes:

Voted, That we hail with pleasure the publication of the "Horticulturist," under the editorial care and direction of our able and distinguished member, A. J. DOWNING, Esq. The well known talents, perseverance and respectability of the publisher, Mr. LUTHER TUCKER, and the entire confidence which we have in our long tried and faithful friend and fellow laborer, Mr. JOSEPH BRECK, all combine to insure its usefulness and success, and enables us in advance to give it our unqualified approbation.

Voted, That the request of Mr. BRECK be complied with, and that he be regularly furnished with the official reports and doings of this Society for publication in the "Horticulturist."

Voted, That the thanks of the Society be presented to Jos. BRECK, Esq., editor of the N. E. Farmer, for the liberal and impartial manner with which he has for many years published the reports and doings of the Society, free of charge, and in particular for the disinterested and high minded course he has ever evinced, both in his editorial and private capacity, to advance the interests of our Institution.

The Society held an adjourned meeting July 11th, President WILDER in the chair.

Pamphlets on the "Cultivation of the Grape," and also on the "Character of the Strawberry plant," by Nicholas Longworth, Cincinnati, were received by the hand of Mr. Ernst, and a vote of thanks passed for the same.

The following persons were elected members:

Benjamin S. Loring, Kimball Gibson, Harvey D. Parker, Henry Robbins, Theodore N. Hall, James M. Blainey, Cyrus W. Jones, B. C. White, Samuel A. Elliot and Geo. H. Gray, all of Boston.

Thomas Groom, D. S. Greenough and Franklin King, of Dorchester.

Stephen H. Cleveland, Freeman Fisher and Lewis Bullard, of Dedham.

J. W. Mandall, Henry S. Waldo, John Fassell and William Seaver, of Roxbury.

Lewis Davenport, Henry Liversage and Dorrance Davis, of Milton.

D. C. Baker, Lynn.

Jay Ambrose Wight, Chicago, Illinois, and Louis Van Houtte, Ghent, were elected corresponding members.

Attest, EBEN. WIGHT, *Rec. Secretary.*

Exhibition of Saturday, June 27, 1846.

In consequence of the extreme wet weather and unpleasant morning, the show of flowers was rather meagre compared with last Saturday's exhibition. A few of our florists, however, were on hand, with their usual complement of flowers.

From Messrs. Winship, Prairie and other Roses in great variety, Lychnis chalcedonica-plena, Clematis alpina, Campanulas, Veronicas, Deutzia scabra, Aconitums, Spireas, together with a great variety of other cut flowers.

From Parker Barnes, six pot plants, Delphiniums, Campanulas, Cinerarias, Roses, fine Pansies, and other cut flowers.

From William Quant, Stephanotus floribundus, a very splendid and highly fragrant stove creeper, with pure white flowers in large clusters, with foliage similar to the Camellia, but larger. Also beautiful specimens of Mandevilla suaveolens and Tecoma jasminoides, greenhouse creepers, and a plant of seedling Cactus from C. ackermannii (beautiful).

From Joseph Breck & Co., fifty Anemones (many of them fine) of various colours, Paisley Pinks, Roses, Kalmias (from the interior), Martagon and other Lilies, Campanulas, Clematis alpina, and cut flowers in great variety.

From J. L. Gardiner, by Daniel Crowley, a great variety of fine Roses, Sweet Peas, &c.

From Hovey & Co., a great variety of fine Roses, including eight varieties of Prairie and twelve varieties of Moss; also one very large and fine bouquet.

From J. L. L. F. Warren, a large fancy design, fifteen small bouquets, White Water Lilies, Gladiolus colvillii, two varieties of Digitalis, three varieties of Campanula media, Dianthus barbatus, Clematis alpina, Delphiniums, Roses, and other cut flowers in abundance, making a fine display.

From Walker & Co., a magnificent fancy bouquet or design, of large dimensions, three bouquets, Roses in variety, Dahlias and cut flowers.

From Wm. Kenrick, by Miss Russel, one large circular bouquet, three small bouquets, and cut flowers

From John A. Kenrick, a fine bloom each of Magnolia macrophylla and longifolia.

From Wm. Meller, a fine seedling and other Geraniums, Paisley Pinks, two bouquets and cut flowers.

From R. West, Salem, a fine fancy bouquet, large size, seedling Geranium (fine flower) and Roses.

For the Committee, JOSEPH BRECK.

AWARD OF PREMIUMS.

For the best designs to Walker & Co.; a gratuity of $2 to Mr. West, for a design by Jeremiah Sheehan. The best bouquet to Miss Russel. A gratuity of $3 to Wm. Quant, for a specimen of Stephanotus floribundus, a new greenhouse climber of great merit.

One exhibition of pot plants, not worthy of premium. Exhibitors of plants would do well to bear in mind that pots take up a good deal of room, and unless they are new or remarkably well grown specimens, they are not attractive.

DAVID HAGGERSTON, Ch'n.

FRUITS.—Grapes: The specimens presented by Mr. D. Haggerston, from the grapery of J. P. Cushing, Esq. of Watertown, were large and highly coloured. The committee tasted the Black Hamburgh, Muscat of Alexandria, Grizzly Frontignan. White Frontignan and White Sweetwater. All the berries were ripe and truly delicious. The Poona the committee did not taste. Mr. Wm. Quant exhibited six varieties from the grapery of the Hon. T. H. Perkins of Brookline, viz. Golden Chasselas, Black Frankendale, Grizzly Frontignan, White Frontignan, Black Frontignan and Black St. Peters. The bunches were large, and the berries well coloured; they were not tasted by the committee.

From Thomas Motley jun. Esq., of Dedham, by Mr. John Galvin, specimens of Black Hamburgh, White Chasselas and White Muscat.

John Fisk Allen, Esq., of Salem, twelve varieties, viz. Early Black Juiy, Miller's Burgundy, Zinfindal, Early White Muscadine, Pitmaston's White Cluster, Black Hamburgh, Red Chasselas, Variegated Chasselas, Grizzly Frontignan, Muscat of Alexandria, White Frontignan, Chasselas de Bar sur Aube.

Otis Johnson, Esq., of Lynn, Zinfindal and Black Hamburgh. Mr. Johnson also presented a box of fine Black Tartarian Cherries, and three boxes of Hovey's Seedling Strawberries. These Strawberries, as also the specimens of Mr. J. last week, were large and fine.

Peaches: Fine specimens of Washington Peach by Mr. Allen of Salem.

By the Messrs. Winship of Brighton, a large dish of White Bigarreau Cherries. They also presented a seedling Cherry raised by Timothy Monroe, Esq., of Brighton—color and size good. Owing to the rain, the committee decline to give their opinion as regards its flavor.

Strawberries: J. T. Buckingham, Esq., Wood and Hovey Seedlings.

Mr. Isaac Fay, a large basket of his Seedling—the berries were large and well colored.

Messrs. Hovey & Co presented several baskets of their Hovey's Seedling and Boston Pine, also of the Deptford Pine. The Boston Pine fully sustains its good character.

Mr. J. L L. F. Warren, Brighton, Red and White Wood, Warren's Seedling, Hudson, Willey's Seedling, Jenney's Seedling, and Bishop's Orange.

Mr. George Walsh, four boxes of Bigarreau Savoy Cherries—the specimens were very handsome.

Mr. George Merriam, five boxes of Black Tartarian Cherries.

Mr. John A. Kenrick of Newton, fine Black Tartarian Cherries.

Mr. J. G. Thurston of Leominster, large white Gooseberries.

For the Committee, S. WALKER, Ch'n.

VEGETABLES.—A peck of early Potatoes from A. D. Williams.

From F. W. Macondry, a basket of early Potatoes.

From A. D Williams, three heads of Cabbage, two bunches of Carrots, and three heads of Lettuce.

From J. Hovey, Roxbury, six heads of Lettuce.

From Wm. Quant, one dish of Tomatoes.

A. D. WILLIAMS JUN., Ch'n.

Exhibition of Saturday, July 4th, 1846.

FLOWERS.—On account of its being a holiday, and amateurs and florists otherwise engaged, the exhibition of flowers was rather small.

From Joseph Breck & Co., Delphinium barlowii, fourteen varieties of Delphinium grandiflora, including double and single varieties of different colors and shades; Delphinium sinensis plena, five varieties of Delphinium elatum, fine double Anemones, six varieties of double Gillyflowers; Campanulas, Spiræa, Iberis, English Iris in variety, Digitalis aurea, Pentstemon digitalis; Lychnis chalcedonica plena, White and Orange Lilies, Veronica variegata and Siberica, and other cut flowers.

From Parker Barnes, a very fine display, among which were Campanula media, Dianthus barbata, Pyrethrum parthenium, Pentstemon digitalis, Veronica, Scabiosa atropurpurea, Iberis, Roses, Pansies, Delphiniums, Pinks, Dahlias, Escholtzia, Verbenas, Lonicera, &c.

From William Meller, 2 fine bouquets, Roses, a variety of cut flowers, and fine branch of Heliotrope.

From William B. Richards, White Lilies, Campanula media, Delphiniums, Digitalis, Papavers, Roses, Iberis, Aconitum, Petunias, with other cut flowers.

From William Quant, six pot plants, viz,: two fine Double Balsams, Achimenes, Fuchsias, Vinca alba, and Cactus.

From J. L. Gardener, by Daniel Crowley, two plants of the Veronica speciosa.

For the Committee, JOSEPH BRECK, Ch'n.

FRUITS.—Mr. Jenny, of New Bedford, presented two boxes and a large dish of his seedling Strawberry, called "Jenny's Seedling" The berries were large, (considering they were the last of the crop,) and notwithstanding the season has been very unfavorable for the ripening of the Strawberries, still the flavor was extremely rich; we class it among the best. In justice to Mr. Jenny and ourselves, we must add that his former specimens came to hand in poor order, they having been gathered when the fruit was wet.

Otis Johnson, of Lynn, four boxes of extra fine specimens of Black Tartarian Cherries.

William Quant, two very superior green fleshed Persian Melons—the flavor was delicious.

George Walsh, Bigarreau Savoy, (?) and also two seedling Cherries. Seedling No. 1, sweet and good; No. 2, firm and fair.

Josiah Richardson, Cambridgeport, good specimens of Hovey's Seedling Strawberries.

Mr. W. W. Wheildon presented a ripe Melon.

Frederick Tudor, Nahant, a large basket of Hovey's Seedling Strawberries.

Cheever Newhall, a large basket of fine specimens of Knevet's Giant Raspberries.

Messrs. Winship, Fastolff, and another variety, supposed to be the Franconia, Raspberry.

Mr Fay presented two baskets of his Seedling Strawberry; the berries were large, but they lacked in flavor.

In our report of last week we omitted to report specimens of the Black Hamburgh Grape, by Mr. Wm. Quant.

For the Committee, S. WALKER, Ch'n.

Exhibition of Saturday, July 11th, 1846.

FLOWERS.—The excessive heat of the past two days cut off the supply of flowers, and but a few fine specimens were found on the stands.

From Messrs. Winship, a superb branch of the Prairie Rose, (perpetual pink) containing 26 full blown flowers, a variety of fine cut flowers, Yucca filamentosa, Spiræas, &c. &c. &c.

From Hovey & Co., six pot plants of Gloxinias, var. rubra, macrophylla variegata, cartoni, two seedlings and tubiflora; also cut flowers of Rocket Larkspur, Potentilla murrayana, and barrattii, Aquilegia skinneri, and a cluster of superb Prairie Rose.

From Joseph Breck & Co., a fine display of cut flowers, among them fine Anemones, Carnations, Picotees, Pinks, Delphiniums, in var.; Lilies in var; Phloxes, Verbenas, &c.

From J. L. L F. Warren one large bouquet, two vase bouquets, two pyramidal bouquets, one bouquet composed of Viola tricolor, and seventeen hand bouquets: Spiræa blanda, Rosea, Grandiflora; Campanulas, Delphiniums in variety, Arbutilon, Cobea scandens, Gillyflower, Seedling Picotees and Carnations, Pond Lilies, Clematis, Marigolds, &c. &c.

From Wm. Kenrick, by Miss Russell, one large bouquet, a basket of flowers, Spiræa grandiflora, &c.

From Richard West, Salem, by J. Sheehan, a fanciful design, for which the committee awarded a gratuity of $1.

From Walker & Co., a fine display of cut flowers, spiræa grandiflora, Delphinium barlowii, and others, Roses, Stocks, &c. &c. and the following Dahlias, some of which were very good specimens for the season, viz: Lady Sale, Stanfield Rival, Grand Tournament, Prince of Wales, Lady Antrobus, A. Hofer. Nonpareil, Lady Washington, Nihil, Mrs. Shelley, Napoleon, and others.

From Wm. B. Richards, Dedham, Delphiniums, Larkspurs Dahlias, Picotees, Spiræas, &c. &c.

From O. H. Mathers, by Thomas Needham, Brighton

Dahlias, Verbenas, Roses, Gillyflowers, Delphiniums in variety, and other cut flowers.

From Wm. Meller, Roxbury, a fine display of Seedling Picotees, comprising about 100 varieties, some of them were very fine; good Dahlias; two bouquets; fine Stocks; Delphiniums in var., Seedling Pinks, and a variety of other cut flowers.

From James Nugent, two bouquets, China Pinks, Phloxes, Balsams, &c. &c.

From John Hovey, fine Carnations, Dahlias, cut flowers in var., and three bouquets.

From Franklin Morgan, Palmer, Mass., a sample from a field of 30 acres of meadow grass and herds grass, manured with plaster and ashes, some of which measured over six feet in length.

The Committee award to Messrs. Hovey & Co., for six plants of Gloxinias, a gratuity of $2; to Mr. R. West, for a design $1; and to Mr. Warren, for bouquets, a gratuity of $1.

For the Committee, H. W. Dutton.

FRUITS.—Otis Johnson, of Lynn, very fine specimens of Black Tartarian and Bigarreau Napoleon Cherries.

J. F. Allen, Salem, fine varieties of Peaches; Nectarines; Figs; Grapes, viz: Black Hamburgh, Wilmot's New, Zinfindal, Black Portugal, Chasselas Bar sur Aube.

Hovey & Co., Fastolff Raspberries.

Cheever Newhall, of Dorchester, two boxes of Knevett's Giant, and branches of the Nottingham Raspberries.

E. E. Bradshaw, Charlestown, five boxes of Franconia Raspberries and two boxes of Gooseberries.

J. L. L. F. Warren, Brighton, Fastolff and Franconia Raspberries; Honey Heart and Warren's Transparent Cherries.

S. & G. Hyde, two boxes seedling Cherries, and a variety for a name—probably the Black Tartarian.

Jonathan French, Roxbury; Gooseberries.

Alex. McLennan, two boxes of fine Gooseberries.

John Hovey, Gooseberries.

Geo. Walsh, specimens of two seedling cherries, Nos. 1 and 2.

Aaron D. Williams, Roxbury, 2 boxes red, and 2 boxes white cherries, 1 box Elkhorn cherries, 2 boxes Downer's red, 3 boxes Franconia Raspberries.

J. Stickney, seedling cherries.

Messrs. Winship, Franconia Raspberries.

John Gordon, Brighton, 4 boxes of Gooseberries with names.

For the Committee, S. Walker, Ch'n.

VEGETABLES.—From A. D. Williams, Blood Beet, Turnip Rooted Beet, Cabbages, Carrots, potatoes.

From J. H. Perkins, by William Quant, six heads Royal Cape Lettuce, one doz Tomatoes.

From A. McLennan, six heads Royal Cape Lettuce.

For the Committee.

A D Williams, Chairman.

Exhibition of Saturday, July 18th, 1846.

FLOWERS.—From M. P. Wilder, President of the Society, two very large specimens of Lilium lancifolium album; also three seedlings, very nearly like L. speciosum or rubrum, but the white or ground color better defined. Six pots new Gloxinias, viz.: maxima alba, cartoni, grandiflora, menziesii, &c. Gladiolus christianus, a new variety of great beauty, color deep scarlet with white stripe. Also 6 pots of Achimenes; 16 pots in all.

Soon after the discovery of these new Lilies by Dr. V. Siebolt, in 1837, Mr. Wilder obtained them, and with his usual zeal commenced hybridizing. From the seed thus obtained, the superb specimens exhibited last season and on the present occasion, were produced. We learn from Mr. Wilder, that he has now quite a number which will soon be in bloom, and that by next year some hundreds will show flowers. He intends then to display them in a bed, the magnificence of which can hardly be conceived. One thing only remains to give these superb flowers a crowning excellence, and that is that they may grow hardy, of which he has great hope.

From Alexander McLennan, a circular bouquet and fine double Balsams.

From Walker & Co., Carnations and other Pinks in great variety, Cimicifugia fœtida, Spiræa palmata, Dahlias, double Gilliflowers, Lythrum salicaria, Phloxes, Roses, Iberis in variety, and a variety of other cut flowers.

From W. B. Richards, fine Dahlias.

From Wm Meller, a splendid display of seedling Carnations and Picotee Pinks, some of them fine, two bouquets, Dahlias, &c.

From J. L. Gardiner, by Daniel Crowley, a fine display of Double Hollyhocks, some of them very beautiful.

From Parker Barnes, fine Dahlias and Roses in variety; double Dahlias, Pinks, Delphiniums, Spiræas, Verbenas, Phlox Drummondii, Iberis; two fine specimens of Agapanthus umbellatus and other cut flowers.

From Messrs. Winship, 3 magnificent specimens of Yucca filamentosa and gloriosa, Roses, Cimicifugia fœtida, and other cut flowers.

From John Hovey, one large and four small bouquets done up in fine style.

From B. West, by J. Sheehan, one large circular bouquet.

From Joseph Breck & Co., Phlox picta, alba keemesina, Van Houtii, Charles, meechantea speciosa, Artabanus, wheelerii, shepardii, nymphea alba, cordata speciosa, Lilium longiflorum, plena candida, martagon, superbum, canadensis, and chalcedonica; Catananche cœrulea, Iberis 4 var., Aconitum variegatum, Spirea palmata, Delphiniums, Double Gillyflowers, Phlox drummondii, Perennial Peas, Fumaria, Carnation and Picotee pinks in great variety, nine bouquets, and cut flowers.

From J. S. Cabot, Gaillardia picta, coccinea, coronata and sanguinea: Clematis sieboldii and hendersonia: Phlox bicolor, donkælerii, alba keemesina, Nimrod, Enclos and Charles; Telekia speciosa, Delphinium grandiflora, Lythrum roseum, Lychnis dioica, Lychnis flore pleno alba, Spigealia Marylandica, and other cut flowers, embracing those new and rare.

From Dr. T. M. Harris, Phlox picta.

From O. H Mather, Dahlias, Phlox Van Houtii, Verbenas, Phlox drummondii, Aconitums, Iberis and other cut flowers.

From James M. Richardson, gardener to Capt. G. Lee, a fine White Seedling Verbena.

From Wm. Kenrick, by Miss Russell, one large and six small bouquets.

From Hovey & Co. fine Carnation and Picotee Pinks in great variety; a beautiful specimen of Passiflora fragrans, (new and fine,) also Thunbergia crysops, very beautiful; Ipomea learii.

From J. L. L. F. Warren, ten bouquets, a fine display of Seedling Pinks and Carnations, some of them beautiful: Spiræa palmata and variegata; Aconitum variegatum, a fine specimen of Gladiolus gandavensis, Dahlias, Water Lilies, Antirrhinum, Delphiniums, and other cut flowers.

From Edward Lewis, Lychnis chalcedonica plena alba, Double Hollyhocks, Aconitum variegatum and other cut flowers.

Award of Premiums on Bouquets, Pot Plants, and Hollyhocks. To J. Sheehan, first premium of $2 for best bouquet.

To Wm. Kenrick, second do $1.

To M. P. Wilder, President of the Society, for a fine display of Gloxinias and Japan Lilies, and a plant of Gladiolus christianus, a new and beautiful variety, a gratuity of $3. For Hollyhocks, the first premium of $3, for the best display, to Daniel Crowley.

For the Committee, Joseph Breck, Chr'n.

Award of Premiums on Carnation and Picotee Pinks. Daniel Crowley, Wm. Doyle and Dean Paine, Judges.

To J. L. L. F. Warren, the first Premium of $5

To Joseph Breck & Co. the second Premium of $4.

To William Meller, for the best display, $3.

To J. L. L. F. Warren, a gratuity of $2 for fine seedlings. Dan'l. Crowley, Chairman.

FRUITS.—Seedling Cherries. J. F. Allen, of Salem, and J. L. L. F. Warren, of Brighton, each presented the Committee with specimens, viz.: By Mr Allen, his Cherry called the Sweet Montmorency—this variety may be classed with the best, and is deserving of extensive cultivation; as a late cherry, it probaby has not an equal as it regards flavor—it should not be gathered until the fruit becomes red and fully ripe. The Honey Heart, by Mr. Warren, is high flavored, sprightly, and may be ranked with our good varieties. The Transparent, by Mr. Warren, is good, but the size is rather small.

Currants—Otis Johnson, of Lynn, and A. D. Williams, of Roxbury, each presented four boxes of very fine currants; also a box of fine white currants, by Mr. Dexter, of Jamaica Plains, Roxbury.

F. W. Macondry, of Dorchester, Sharp's Seedling Peaches, and one variety without name; also Figs.

Alexander McLennan, of Watertown, some very fine Gooseberries, and a Persian Melon.

Pears.—Amire Joannet, by J. S. Cabot of Salem, and Chapman's Early, by Messrsn Hovey; they are both unworthy of cultivation, at least in this part of the country.

E. E. Bradshaw, of Charlestown, Franconia Raspberries.

J. L L. F. Warren, of Brighton, Franconia Raspberries, and Seedling Cherries, viz,: Warren's Honey Heart, and Warren's Transparent.

J F. Allen, of Salem, four boxes of his Seedling Sweet Montmorency Cherries, fine and delicious; also Franconia Raspberries; six varieties of Peaches, viz: Early Crawford, Kenrick's Orange, Grosse Mignonne, New Jersey Grosse Mignonne, Tippecanoe (?) and Noblesse. Nectarine, Violette Hative; also six varieties of Grapes, viz.: Wilmot's New Black Hamburg, berries large, highly colored, and fine flavor; White Frontignan. Black Hamburg, Zinfindal, Black Prolific, and Chasselas de Bar sur Aube.

For the Committee, S. WALKER, Chairman.

VEGETABLES.—From A. D. Williams, Tomatoes, Carrots and Potatoes.

From O. H. Mather, by Thomas Needham, Cucumbers, extra size.

From Jeremiah Macarty, 3 heads of Cauliflowers.

For the Committee, A. D. WILLIAMS, Ch'n.

PENNSYLVANIA HORTICULTURAL SOCIETY.

THE stated meeting of this Society was held in the Chinese Saloon, Philadelphia, July 21, 1846. The President in the Chair.

Reports of the Standing Committees.—The Committee for awarding premiums on fruit, for the intermediate meeting, July 7th, respectfully report, that although no premiums are proposed by the schedule for this occasion, yet as several interesting specimens are exhibited, they have thought expedient to award special premiums of one dollar each for the following objects, viz: for a specimen of Madeleine Pears, and also for a display of Pears, to John Austin, gardener to J. B. Baxter. For the best Gooseberries, the Alton Tower, to Mr. Duchet, gardener to General Patterson For Gooseberries, to John Austin; for ditto, to Andrew Patton, gardener to Mrs. Kohne. For the best Red Currants, to Adam Uber. For Red Currants, for Black Currants, and for White Currants, to Andrew Patton. For Raspberries, to the same; and for a display of Red, Black, and White Currants, to Samuel Cooper, a premium of two dollars. The Committee on Vegetables award special premiums of one dollar each, to Andrew Patton, gardener to Mrs. Kohne, for a fine display of Tomatoes, and to John Austin, gardener to J. B. Baxter, for a display of Beets.

For objects on the present occasion, by the Committee on Plants and Flowers. For the most interesting collection of Plants in pots, to James Bisset, gardener to James Dundas. For the best display of indigenous plants, to Robert Kilvington. For the best Bouquet, and for the best do. formed of indigenous flowers, to Archibald Henderson, gardener to W Chancellor. For the next best Bouquet, to William Hall, gardener to Caleb Cope. And special premiums of one dollar each, to Archibald Henderson, for display of indigenous flowers; and to Anthony Felten and Archibald Henderson, for Bouquets.

By the Committee on Fruits.—For the best Raspberries, the American Red, to Philip Gallagher, gardener to Miss Gratz. For the next best, same var., to Andrew Patton. For the best Red Currants, to Archibald Henderson. For the best Black Currants, to Philip Gallagher. A special premium of one dollar for Black Currants, to Andrew Patton. For the best Apricots, the Moor Park, to William Johns. For the next best, the same variety, to James Bisset, gardener to Jas. Dundas. And the following special premiums, one of five dollars, to Isaac B. Baxter, for a seedling Apricot, presumed to be the finest exhibited to the Society; one of two dollars, to Dr J. W Thomson of Wilmington, Delaware, for excellent Moor Park Apricots, not sufficient for competition; one of one dollar to Andrew Patton, for Moor Park Apricots; one of two dollars to Uriah Hunt, for a very superior Plum, name of the variety lost; it was a very large, red plum, nearly round; one of one dollar, to Patrick Gallagher, for very large Figs—Brunswick variety. Five dollars to W. Westcott, gardener to J. Cowperthwaite, for very fine Black Hamburg Grapes, raised under glass Three dollars to Wm. Hall, gardener to C. Cope, for superb Black Hamburg Grapes. One dollar to James Bisset, for Cannon Hall Muscat Grapes For the best named variety of Apples, the Early Harvest, to Thomas Hancock, Burlington.

By the Committee on Vegetables.—For the most interesting display of Vegetables, to Anthony Felten; and for the next most interesting display, to John Austin, gardener to J. B. Baxter.

The Committee of Finance reported, that they had examined the Treasurer's statement of accounts, and found it correct, and in correspondence with the vouchers.

The Committee to superintend Exhibitions reported, that they had fixed on the 16th, 17th, and 18th days of September, as the time for holding the Autumnal Exhibition, and there were five vacancies in the Committee, which were filled by the President.

Dr. Wm. D. Brinkle submitted a series of Resolutions expressing the deep regret of the Society at the loss sustained in the death of its late Vice President, Joseph Price, Esq., who died on the 30th. ult., in the 78th year of his age—the testimony of this Society to his great worth and amiability of character, and the loving zeal he always manifested in its prosperity. These resolutions were unanimously adopted, and the Recording Secretary ordered to transmit a copy of them to the nearest relative of the deceased.

The Recording Secretary stated, that he had received a communication from the Editor of the HORTICULTURIST; he requested that he might be furnished with the official reports of the proceedings of the Society for publication in that periodical. When on motion, *Ordered*, That the committee of publication comply with such request, and furnish, from time to time, the reports.

Objects exhibited at the intermediate meeting, July 7th. The display was unusually fine, as may be inferred from the reports of committees on awarding premiums.

On the present occasion, *Plants*, shown by James Bisset, from James Dundas's collection, consisted of a number of species of Achimenes, very handsome, and other plants.

By Wm. Hall, gardener to C. Cope—Achimenes, grandiflora and long.flora, grown in suspended wire baskets, filled with bats, chips, &c., similar to the Orchideous plants, which presented a most beautiful and novel appearance, covered as they were with their handsome flowers.

By Ritchie and Dick—Banksia serrulata, in flower. and pots of seeding Lilies, raised from the seed of L. superbum, by Mr P. Wilder, of Boston.

Bouquets.—A number of beautiful baskets, &c., by Archibald Henderson, Wm. Hall, and others.

FRUIT—*Apricots*, by Wm. Johns; the Moorpark, by Isaac B. Baxter, a superior seedling, shown for the first time; by Dr. J. W. Thompson, splendid Moorpark; by James Bisset, fine Moorpark; by Andrew Patton, gardener to Mrs Kohne, Moorpark; by Wm B. Potts, the Roman; by Thomas Hancock, Peche and Breda.

Raspberries, by P. Gallagher, gardener to Miss Gratz; by Andrew Patton; by Dr. W. D Brinkle, Orange Raspberry, a seedling from Dyack's Seedling, grown by himself.

Currants, by A Henderson, Red; by P. Gallagher, Black; by Andrew Patton, Black.

Plums, by Uriah Hunt, a large round red variety, name not known; by Thomas Hancock, Yellow Gage; by George Fox, Yellow Gage.

Apples, by Thomas Hancock—Red Astrachan, Woolman's Harvest, Early Strawberry, Large Yellow Bough, and Early Harvest.

Pears, by Thomas Hancock; Early Catharine, by P. Gallagher and others.

Figs, by P Gallagher—Brunswick, very large size.

Grapes, by Caleb Cope—Black Hamburgh, raised under glass—berries very large—flavor excellent; by W. Westcott, gardener to J. Cowperthwaite, Black Hamburgh, bunches very large and fine; by James Bisset, the Cannon Hall Muscat and Royal Muscadine.

Vegetables, by Anthony Felten, a very large and fine collection; by John Austin, gardener to Isaac B. Baxter, a creditable display.

THOS. P. JAMES, *Rec. Sec.*

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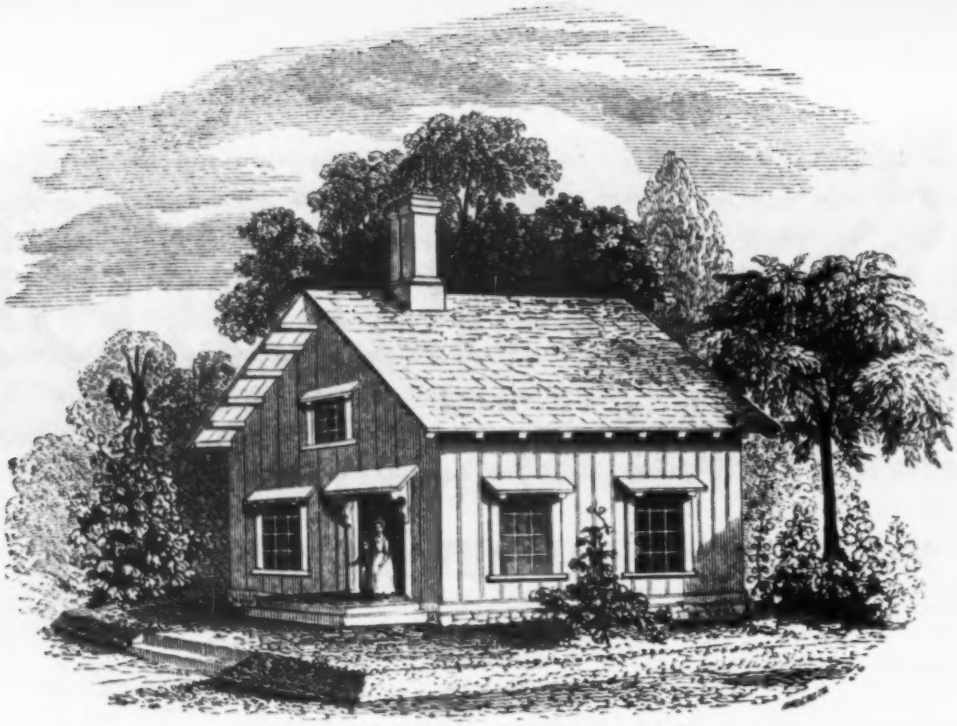

FIG. 30. (See page 106.)

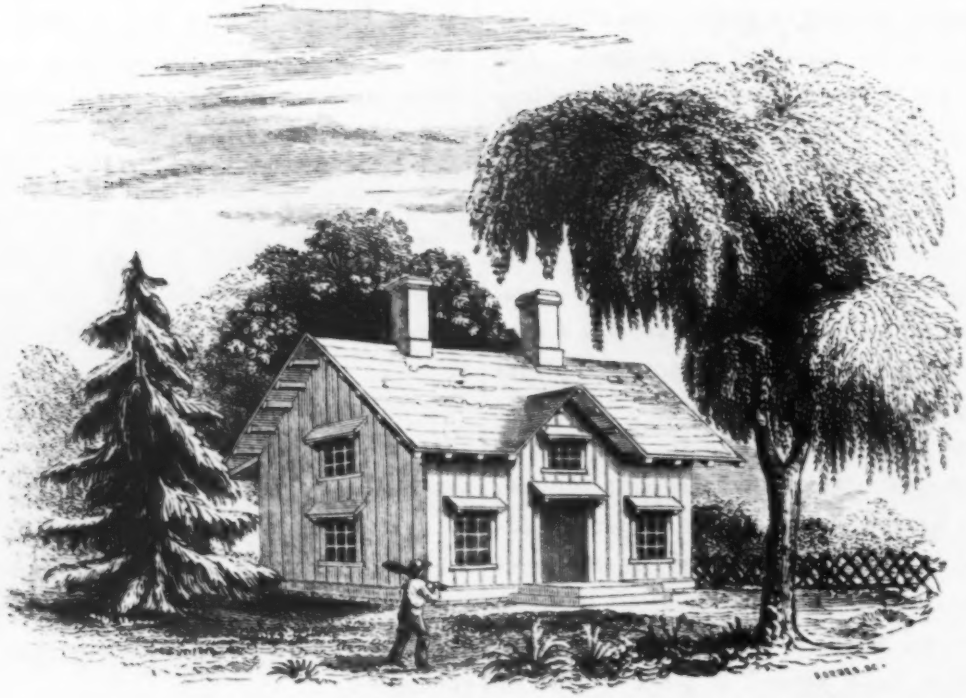

FIG 31. (See page 108.)